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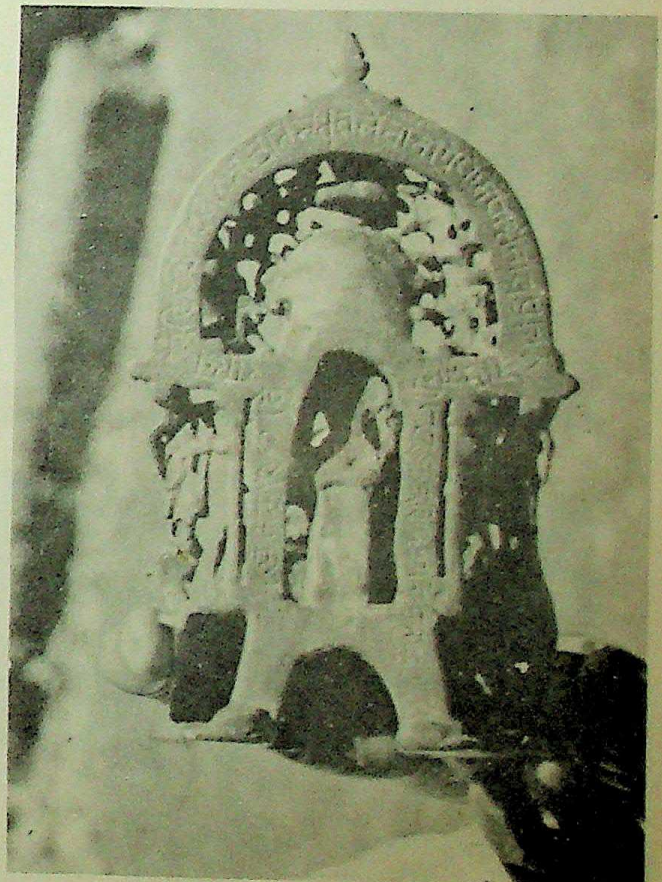
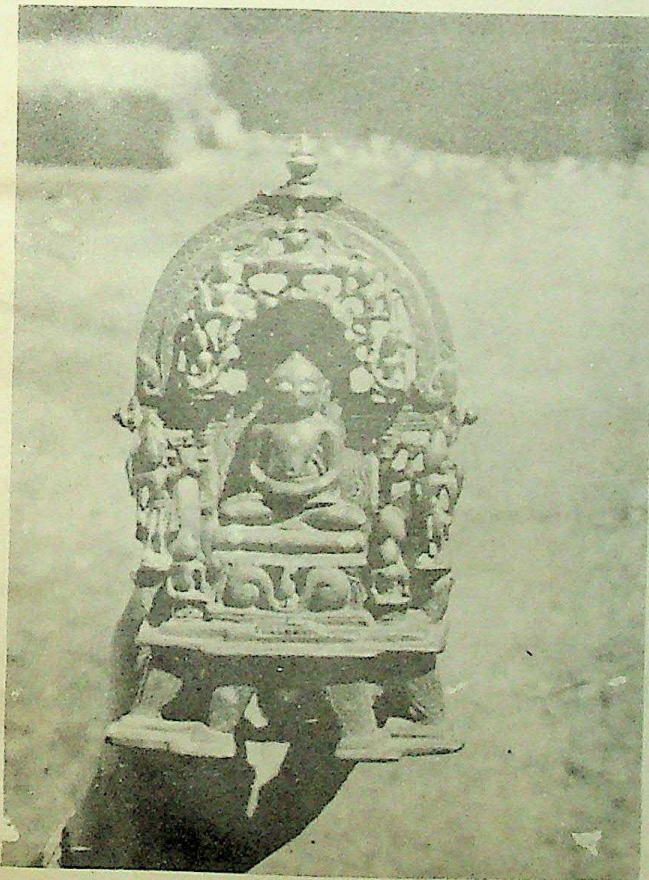
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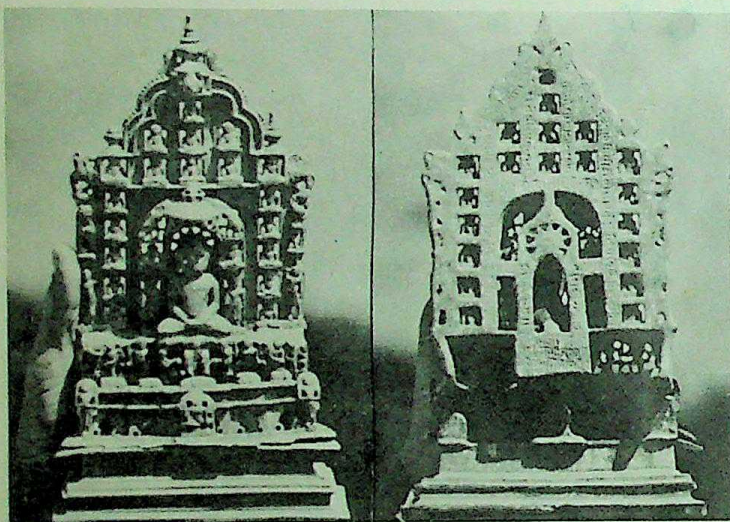


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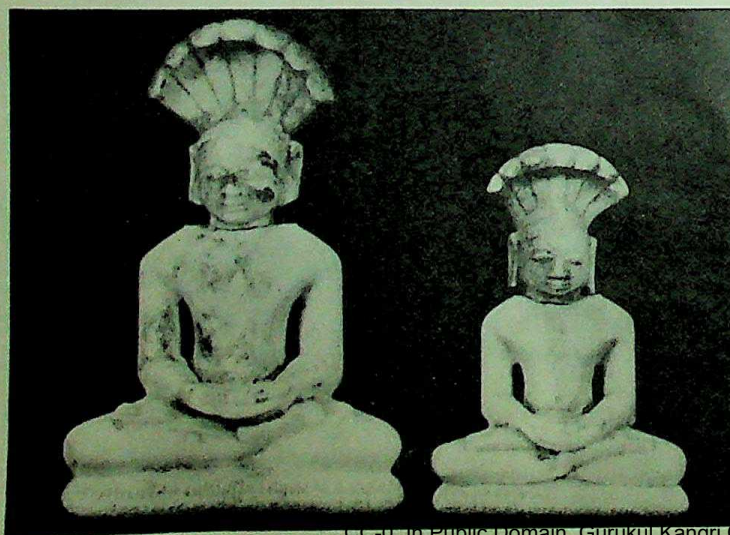
A study group of the Institute is working on the neglected monuments in the Maharashtra state. Recently the group visited the Ratnagiri District. The photograph on the coverpage is of Parshwanath, the 23rd Tirthankar of Jains. The inscription on the reverse mentions Samvat 1201 i.e., 1144 A.D. Probably this is for the first time that a bronze Jain Deity of this period is reported from the Ratnagiri District. Usually the Jain temples are well-maintained, but these deities were found in a totally uncared Jain temple at Rajapur. There are not many Jains in the District of Ratnagiri. One more Jain Deity of the bronze of the period 1462 A.D. is also found in the same temple. (Photo No.1) The study group has collected two more marble idols of Parshwanath of the period 1491 A.D. from the forest around Rajapur. These new findings will help to assess the Jain influence in the Konkan Districts.

The study group visited about eight ancient temples in the vicinity of Rajapur (about 50 kms) District Ratnagiri. Few of the temples visited by the study group are not mentioned in the district Gazettier.

The group has taken more than hundred photographs and have collected about fifty rare manuscripts - from the remotest villages in and around Rajapur. (Rajapur is about 400 kms from Bombay on Bombay-Goa Road. It was a very prosperous port in olden days having tradelinks with Arabian Countries. British, French and Dutch had their offices established at Rajapur. It is also very famous for Rajapur Ganga which is peculiarly known for its intermitant appearance.



No.1: A bronze Jain Deity found at Rajapur. The inscription on the reverse gives the period Samvat 1519 i.e. 1462 A.D.



No.2: Two marble deities of Parshwanath found in the jungles around Rajapur. The inscription at the bottom gives the period Samvat 1548 i.e. 1491 A.D.



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Editorial

It is usually believed more by Indian Scholars and intelligentia that Western Indologists and Orientalists are actuated by purely academic interests, pursued in an objective, scientific and critical spirit. This belief needs thorough scrutiny as our modern Indian Scholars bear this belief in mind while assessing the conclusions presented by Western Orientalists particularly in the field of Archaeology and History. This blind faith in the honesty, scientific approach and motives of Western Scholars distorted the history beyond the limits of imagination though few of them have undoubtedly approached their task in an unimpeachable manner, it is not so well known that a vast majority of the, who have exercised tremendous influence in the world of scholarship, have been motivated by extraneous considerations, both religious and political.¹ I give you few examples to prove the existence of this inveterate prejudice.

The names H. H. Wilson and Monier Williams need no introduction. Both were occupants of Boden Chair in Sanskrit at Oxford University. Professor Monier Williams writes on the object of the establishment of the chair in the following words:

"I must draw attention to the fact that I am only the second occupant of the Boden chair, and that its Founder, Colonel Boden, stated most explicitly in his will (dated August 15, 1811 A.D.) that the special object of his munificent bequest was to promote the translation of scriptures Sanskrit; so as to enable his countrymen to proceed in the conversion of the natives of India to the Christian Religion."²

It is interesting to learn what Monier Williams writes further "when the walls of the mighty fortress of Brahmanism are encircled, undermined and finally stormed by soldiers of the cross, the victory of Christianity must be signal and complete".³

The book "The study of Sanskrit in relation to Missionary work in India" (1861 A.D. London) was written with the sole object of promoting christianity and ousting Hinduism.

Two German Scholars Weber and Boehlingk prepared a Sanskrit language dictionary. Professor Goldstucker found this work unreliable and misleading as it was based on the wrong and imaginary principles of philology. He wrote, 'It will, of course, be my duty to show, at the earliest opportunity, that Dr. Boehlingk is incapable of understanding even easy rules of Panini, much less those of Katyayana and still less is he capable of making use of them in the understanding of the classical texts. The errors in his department of the Dictionary are so numerous that it will fill every serious Sanskritist with dismay, when he calculates the mischievous influence which they must exercise on the study of Sanskrit Philology'.⁴

Prof. Weber could not digest this criticism and used abusive language against Prof. Goldstucker.⁵

Voltaire wrote an Essay on the Morals and the spirit of the Nations in which he spoke highly

of the ancient cultures of India. China and Persia in comparison with Judea and chridstendom. His frank and bold views were taken an upatriotic and he was exiled by the French Governments

Many Indian Scholars and Reformers in the past and even today believe that India remained integrated under British Rule, acquired economical stability education and law and order was well maintained during British regime. Mr. R. C. Dutt, author of the Economic history of India' writes, "A sum reckoned at twenty millions of English money or a hundred millions of American money Some authorities put in much higher is remitted annually from India to England and without any direct equivalent. It should be born in mind that this sum is equal to half of what we here in India pay every year in taxes goes out of the country and is of no furhter service to those who have paid this tax. No other country on earth suffers like this at the present day. No country on earth could bear such an annual drain without increasing impoverishment and repeated famines". Those interested more can read 'Major Wingate's book "A few words on our financial relations with India"⁷

The British policy in India has been from the beginning of 'Divide and Rule'. The British could have never conquered the land without this policy. They knew well that division always weakens the nation and renders it easier to hold in subjection. As early as in 1821, a British officer wrote in the Asiatic Review of May of that year, 'Divide et impera should be the motto of our Indian Administration whether Political, civil or Military'. About the time of muntiny, Lt. Colonel John Coke wrote, "our endeavour should be to uphold in full force the (for us fortunate) separation which exists between the different religions and races, not to endeavour to amalgamate them".⁸

Lord Elphinstone, Governor of Bombay, in a minute, dated 14th May 1950, wrote, 'Divide et impera' was the old roman motto and it should be ours.⁹

The main object of this editorial is to throw light on these hidden motives of some western scholars. "What today passes as 'Scientific'. 'Objective' and 'Critical' research is, in fact, Vitiated by the underlying and subtle influence exercised by none too academic motives. To rethink, re-evaluate history is not a crime. It is not too late before we get rid of this intellectual slavery of the West.

The leading article of this issue is of Prof. Marvin Mills, U.S.A. on Carbon dating of Tajmahal. We are grateful to Dr. Van dan Bosh of Netherlands, for allowing us to print his papers on Yama in this issue. Mr. S. D. Kulkarni's article is thought provoking.

1. Western Indologists, a study in motives Bhagwad Dutta, Itihas Prakashan Mandala, New Delhi-12.

2. 'Sanskrit - English Dictionary by Sir M. Monier - Williams. Preface P IX, 1899.

3. Modern India and the Indians, by M. Williams, third ed. 1879. P.262.
4. 'Panini his place in Sanskrit Literature Allahabad Edition, P.195, 1941'.
5. Ibid P.200.
6. The story of Philosophy by will Durant, P.241.
7. Major Wingate was Revenue Survey

Commissioner for the Bombay Presidency His book was published in 1859 by 'William Blackwood and Sons, London', and republished in 1926 by Major B. D. Basu I.M.S., in Allahabad).

8 & 9 'Consolidation of the Christian Power in India', by Major B. D. Basu, Chapter VI, pp.74, 75 (R. Chatterjee, publisher, Calcutta, 1927), 'The Modern Review', Calcutta May 1926 p.556.

Bharat Desh As Seen From Rigveda

By S. D. Kulkarni

That Rigveda is considered to be the first recorded utterance of mankind is no more a matter of dispute. But about its date, the Indologists widely differ. The Western Pundits accept the great antiquity of the Rigveda, but they consider it to be posterior to the Egyptian monumental records and the papyrus rolls and the Assyrian literature engraved in mud bricks. In spite of this, they determine the date of the Rigveda Samhita as not earlier than 1200 B.C. Not only this but they consider the Vedic people as undiluted barbarians who invaded India i.e. Bharat sometime around 1800 B.C., and destroyed the highly developed Indus civilization, settled on the banks of the Sindhu, the Ganga, the Saraswati and composed the Rigvedic hymns round about 1200 B.C. It is worthy of note here that the word 'Arya' appears for the first time in Rigveda and its meaning is 'civilized'. It does not denote any race. Yet the Westerners have got enamoured by this word and woven romantic connotations around it. They have been using it in the sense 'Aryan' for race. This usage now established is incorrect. I shall therefore not use it in this sense here. It is further surprising that they label them 'Aryans' and abuse them as 'undiluted barbarians' even before the term 'Arya' came to be used about 'civilised' people.

They do not bother to consider if by so doing, the Mahabharat war which we by tradition and consensus believe to have been fought in the year 3138 B.C. is rendered mythical, they, simply deny that the founder of Vikram Era in 57 B.C., ever existed. The founder of Shalivahan era in 78 A.D. according to them is a mythical person. Then they weave theories about these persons and try to prove that Kanishka the Kushan leader founded these eras. Most of the reputed Indian scholars follow this line laid down by the Westerners, the great Orientalist Prof. Max Muller included.

Now the archaeological discoveries at Mohenjodaro and Harappa in Sindh & Punjab and a host of other places scattered all over India, show that the civilization which they depict was a highly developed one and that its date proved by carbon (C14) test is about 3100 B.C. It is obvious from this that the evolution of such a highly developed civilization must have taken quite a few centuries, and one can safely say that its beginnings

can be traced to about 4000 B.C.

The Indian tradition without any doubt or difficulty accepts the antiquity of the Vedas. It readily accepts the date of Rigveda Samhita as 4500 B.C. as determined by the late Lok. Tilak and the composition of some of its earlier hymns as going back to 6500 B.C. or even to a greater antiquity. The Indian historical tradition as handed down to us by the Epics, the Puranas, the day-to-day utterance of the Sankalpa that Shalivahan era did start from 78 A.D. asserts that the Kaliyuga started from 3101-2 B.C. The Yudhisthirabda or Loukikabda is still being observed in Kashmir and its start from 3076 B.C. is unquestioningly accepted by the Indian people without any hitch or hindrance.

But the advent of the Western Indologists on the scene has distorted beyond all imagination all these beliefs so far held by the Indians. Prof. Max Muller's determination of the Indian chronology as noted earlier now holds the field. But that this contradicts their own discoveries is now becoming more and more apparent. The consensus now evolving amongst the Western Indologists including Wheeler about the date of destruction of the Indus Valley civilization as around 3100 B.C., conflicts with their pet theory about the hordes of the Aryan invaders coming down on the peace-loving Indus Valley people in their chariots about 1800 B.C. and destroying their civilization by arson, loot and murder. In passing one can note here that the passes in the Hindukush and Karakoram Ranges on the Indo-Afghan border, are even today unsafe for the chariots to pass.

The Indian Indologists are now veering round to the view that Shakari Vikramaditya and Shalivahan were not only not mythical persons but were the real Heroes who established their suzerainty over large parts of India and founded the areas in their own names. Similarly they are accepting Mahabharat war as a historical event which took place around the beginning of the Kali era which was started from 3101-2 B.C.

These assumptions necessarily take the date of the Rigveda Samhita atleast to a few centuries prior to the start of the Kali era. I shall now try to show how the Rigveda itself proves that the Vedic people belonged to the Sapta-Sindhu Pradesh i.e. Bharat and the question of 'Aryan' invasion of or migration to Bharat is nothing but

a figment of imagination.

The hymn 2.14.7

अध्वर्यवः यः शतमासहस्त्रं भूम्याः उपस्ये अवपत
जघन्वान्। कुत्सस्य आयाः अतिथिग्वस्य
वीरान् अवृणक्त भारताः सोमं अस्मै॥

of the Rigveda states that Indra killed hundred thousand soldiers of Ayu Kutsa and Atithigva in a battle and they lay on the battle-field helter-skelter. It should be borne in mind that whenever the Rishis compose hymns in praise of Indra and his exploits these are in fact the eulogies in praise of the king or his chieftains of the day. In this hymn Rishi Gratsamada gives details of the exploits of Indra and acquaints us among other things, with this event of major importance.

Now Kutsa, Ayu, and Atithigva are the Vedic Chiefs and it is stated that they suffered heavy casualties in battles against the king of the day. The Bharata priests performing the sacrifice are, therefore, requested by Gratsamada to offer SOMA to the king or his chieftain who has won this battle. This shows that the people of Bharata have rejoiced in this victory over the other Vedic Chieftains.

In Rv 1-53-10

त्वं आविष्य सुश्रवसं तव ऊतिभिः तव ग्रामभिः इंद्र सुवयानम्।
त्वं, अस्मै कुत्सं अतिथिग्वं आयु मदेराक्षे युने अरेयनायः॥

we are also informed that these three allies - Ayu, Kutsa and Atithigva were captured by the king as they waged battles against Sushravasa and Turvayana.

Divodasa, one of the most powerful chieftains mentioned in the Rigveda often and the father of Sudasa, the hero of the famous Dasharadnya battle, is also stated to have been captured by Vadhyasva in a very grim battle fought on the banks of Saraswati

इयं अद्दात् रमसं ऋणय्युतं दिवः दासं वध्यं य
दागुषे। (Rv.6-61-1). In this hymn, we are also

told that Paravatas and Brisayas who harboured hatred towards the Devas, were also destroyed there on the banks of this Saraswati. These Brasayas are now identified with the present day Baluchi and Irani tribes of Bahui or Birohi people.

Some say that in this hymn, Divodasa is stated to be the son of Vadhyasva, but this is clearly a wrong translation in as much as in hymn Rv.10-69 Sumitra is mentioned as the son of Vadhyasva who is stated to have belonged to the older generation. This hymn has been composed by Sumitra and with justifiable pride, he describes himself as a very adventurous and valorous soldier from the family of Chyavanas. In this or in the subsequent hymn which has also been composed by him, he does not even remotely mention Divodasa who is very famous all over the Rigveda.

It has to be remembered here that the Rigveda is not a book of historical record. It is a book of prayers addressed to different deities by different

Rishis and from the stray references here and there we have to collate different events and piece them together as to present a cohesive history of the people and their times. What is necessary is that far fetched conclusions based on preconceived notions, should not be drawn from these references scattered all over this prayer book.

In Rv.1-53-8

त्वं करंजं उत पर्णियं वधीः तेजष्ठया अतिथिग्वस्य वर्तनी।
त्वं शतं वंगुदस्य भिनत्पुः अनानुदः परिपूताः ऋजिश्वना॥

Atithigva one of the three allied chieftains, is stated to have scored a signal victory over the Karanja and Parnaya peoples. And likewise, Rijishwan has been successful in destroying hundreds of forts of Vringad. These Parnayas lived in Balhik region of Iran, and Rijishwin (or Rijrashwa) has been identified by Parsi scholars with Arjaspa of the Avesta. E. Sheheriarji in the Cama Memorial Volume quotes RV.1-100-17 and tries to show that the Avestan name Arejetaspa is identical with the Vedic name Rijrashwa, as both words are identical in sound and meaning. They mean "one who has swift horses". In this hymn itself (1-53-10) we get the information that this very Atithigva along with his friends, Ayu and Atighigva, has been captured by Sushravas and Turvayana. But in RV.6-18-13 we read about the release of these three friends captured by Turvayana.

In Rv.4-26-1 and 3, we find that Kutsa, Divodasa, and Atithigva are mentioned together and they are shown to be the favourites of Indra, the then King.

In this connection, let us consider another set of hymns. In RV.6-27-7 and 8, we are told that Sranjaya captured Turvasha and Daivavata captured Vrichivata. In verses 5 & 6 of this hymn, we get further information that Varasikhas were killed by Abhyavarti Chayamana and the Vrachivatas were also defeated on the banks of Hariyupiya and Yavyavati. And to celebrate this signal victory, Chayaman, the Emperor gave unparalleled gifts to Rishi Bharadwaja.

From this hymn we come to know that Chayamana whose capital was Abhivarta, was the Emperor of Parthava people, and Sranjaya and Daivavata were his commanders who won this big battle for him. Priest Bharadwaja appears to be the favoured priest of this Emperor. This priest also obtained huge gifts from Prastoka the son of Sranjaya and from Atithigva through Divodasa. We have seen above that this Bharadwaja praises the then king who has released Kutsa, Ayu and Atithigva who were previously captured by the commander of the King for their treasonable activities.

That Bharadwaja is a very good friend of Divodasa is amply clear from hymn RV.6-16-5.

From the hymn RV.7-18-22 and 25, we also know that Sudas, the son of Divodasa, is the grandson of Devavata. So Daivavata who captured Vrichivata

1 (See, Hodiwala's Zarathushtra and His Contemporaries in Rigveda - P12, 13-1913).

for Chayamana can easily be identified as Divodasa the father of Sudas.

From all these facts noted above, we get the following connected story of the events as they took place in that remote antiquity.

Chayamana of Abhivarta was the Emperor of Parthava people. Sranjaya and Divodasa were his Chieftains who were themselves very powerful. Rishi Bharadwaja was very well connected with both the Emperor Chayamana and his trusted commander Divodasa. The three allied chieftains Ayu, Kutsa and Atithigva were also the friends of both the Emperor and Divodasa.

However, Ayu, Kutsa and Atithigva forged an alliance with Divodasa for the sole purpose of reducing the influence of the Emperor Chayamana and in the process suffered defeat and capture at the hands of his Commander Vadhyrasva and Turvayana. But were later on released through the embassy of Bharadwaja, who was on very friendly terms with both the emperor and Divodasa. Another important point to note is that the captors of Ayu, Atithigva and Kutsa are offered Soma i.e. hospitality by the people of Bharat.

These facts clearly emerge from the information gathered from the few hymns considered here. If we note here that the translation of the hymns given here is correct, or atleast is not farfetched, and from these we can weave a mutually consistent and logical chronology of events, we have to draw the unmistakable conclusion that Chayamana the King of Parthava was the Emperor of the then Bharat Desh. Otherwise, all these events fall into separate and mutually inconsistent parts without any connection with each other. In the latter case, we shall have to take these hymns, to be stray babbles of a nomadic people, which they certainly are not. The hymns are the compositions of a very highly intelligent people well versed in the art of poetic construction. Some of these hymns contain such very lofty thoughts as are not even surpassed today by any highly gifted genius. As Prof. Bloomfield, while noticing Tilak's Orion (first published in 1893) in his address on the occasion of the eighteenth anniversary of John Hopkin's University had stated, "the language and literature of the Vedas is, by no means, so primitive as to place with it the real beginnings of Aryan life These in all probability and in all due moderation reach back several thousands of years more" prior to 4500 B.C. He had further said "it is needless to point out that this curtain, which seems to shut off our Vision at 4500 B.C. may prove in the end a veil of thin gauze". Dr. Jan Gonda of the State University of Utrecht (Netherlands) in his Introduction to 'The Vedas' by Miss Jeanine Miller 1974 P.XIX has this to say of the Rigveda, "The Rigveda, the oldest of the four Vedas, is extremely rich in lore of every kind: social, psychological, religious, philosophical, historical, anthropological, mythical".

The point I am trying to drive at is that it is the duty of a researcher of the Vedic literature to correlate different events noted in different hymns of the Rigveda and present, as far as possible, a consistent and cohesive history of the Rigvedic people and the times.

If now Chayaman of the Parthavas is accepted as the Emperor of Bharat with his capital situated at Abhivarta, it should be our endeavour to identify and locate it on the map of the present day world. Shri Devising Chauhan in his book in Marathi Bharat-Iran Samslesha Part-I (1973) states that Abhivarta is now a village in Khorasan, the Eastern province of present day Iran. He also holds the view along with Western Indologists like Hillebrandt, Geldner and Pischel that Halmand the river in South-Western Afghanistan was the Hamun on the Iran-Afghan border. Its lend name is Arakhosia. The borderland of this Harahvati is now called Harut in Afghanistan. I agree with this interpretation.

But the scholars now suggest that the present day small stream between the Ganga and the Yamuna rivers, and which appears and disappears on and off and ultimately joins a small river Chaggar in Rajasthan, is that very famous and mighty river Saraswati of the Rigveda. This we do because we consider the present boundaries of Bharat, as the boundaries of Bharat even in the Rigvedic times. The present boundaries are the Himalayas on the North, Indian Ocean on the South, the Sindhu on the West and Assam-Bengal on the East. After partition of Bharat in 1947, Sindhu is now in Pakistan. But if Abhivarta in the present day Eastern Iran was the capital of Bharat known to the Rigvedic, then this small stream between Ganga and Yamuna can not be that mighty stream known as Saraswati to the Vedics. It is most probably Halmand of the present day. This river known to the Zend-Avesta as Harahvati now disappears near Hamun on Iran-Afghan border. In the days of Rigveda it must be joining the sea nearby.

In Puranas we are told that Saraswati is Plakshaga i.e. it disappears near a place named Plaksha-Prasravan. This is also named Vinashan by name (See B.C. Law's Historical Geography of the present day. Its probable name according to Puranas, may have been Plaksha-dweep, as Shri. Devising Chavan in his above referred to book suggests.

According to the Rigveda, the land where the Vedics had their hey-day is Sapta-Sindhu Pradesh or Hapta-Hendu Pradesh of the Avesta (In Avesta S become H). B.C. Law (p.31-ibid) says, "The entire country occupied by the Rigvedic Aryans has been described in the Rigveda (10-75-4) as Sapta-Sindhavah-the land of Seven rivers - namely five rivers of the Punjab together with Sindhu and another river whether it be the Saraswati or the Kubha (Kabul) or even the Oxus". This last named Oxus is to the North-Western side of present day Iran. Later on when Bharat was identified as the land between present boundaries as noted before, the seven principal streams called the Ganga, Yamuna, Godavari, Saraswati, Narmada, Sindhu and Kaveri were recognised as the Sapta-Sindhavah. But to the Rigvedics the Sapta-Sindhu Pradesh was the land watered by Saraswati, Sindhu, Jhelum (Vitasta of the Rigveda Chenab (the Vedic Asikni), Ravi (Parushni), Beas (Vipata or Vipasha), Sutlej (Shatadru)'. The last named Sutlej is the eastern most river of the Rigveda. The Ganga is not the famous river of the Rigveda. The Sindhu and Saraswati are the

most sacred and famous rivers of the Vedics.

When Sudasa defeated Kavi of the Chayamana dynasty in that famous Dasharadnya battle and proclaimed himself as the Emperor, the Chakravarti King of the Bharatas, Vishwamitra the famous Kshatriya-king turned priest crossed the Beas and Sutlej for the first time in Rigvedic History among with the Bharata people and came to the Ganga-Yamuna Doab and settled there. This information can be glean from the hymn RV.3-33-10.

Thus it appears that as the after-math of the Dasharadnya war, the capital of the Emperor of Bharata Desh, was transferred from Abhivarta to some place between the Ganga and the Yamuna. This was the turning point in the relationship of the Vedics who stayed behind in the Western region of Bharat Desh beyond the Sindhu and those who crossed over the rivers of the Punjab and came to settle permanently in the Eastern region of the then Bharata-Desha.

If we can show from the Rigvedic hymns themselves that the battles which were fought by the Vedics between their different groups and between them on the one hand and the Dasyus on the other, in the region mostly lying to the west of the Sindhus, and that they crossed over the Punjab rivers and created new settlements in the region lying to their East, we shall have succeeded in establishing our thesis that the Rigvedic Bharat-Desh comprised of the present day Iran, Afganistan, Sindhu-Punjab and Kashmir and this picture began changing after the Dasharadnya War.

In hymn RV.6-27-5 to 8, (noted before) we get two names of the two groups i.e. Varsikha and Vrichivata who were defeated by or on behalf of Chayaman, the Emperor, on the banks of the rivers Hariyupiya, and Yavyavati. Sranjaya captured Turvasha and Divodasa took Vrachivata into his custody.

Now Varsakha is a small river north of Kabul, beyond Hindukush Mountains. It is well known that the different groups of peoples or the countries got their names after the rivers on the banks of which they flourished e.g. Sapta-Sindhu Pradesh from the seven rivers watering this vast region or the Punjab from the 5 small streams watering it. The rivers Hariyupiya and Yavyavati may also be the small streams near this Varasakh river, now known by some different names. The group which settled on this river Varasakha, appears to have got the clan-name Varasikha. This group along with Vrichivatas appears to have created trouble for Chayaman and so Sranjaya and Divodasa on the orders of the Emperor Chayamana, nipped this trouble in the bud by defeating the Varasikhas and capturing Turvasha and Vrichivata, their allies.

Yadu and Turvasha, these two clans are named together at many places in Rigveda. Vasishta prays Indra to subdue these two and hand them over to Atithigva (RV.7-19-8). In RV.9-61-2, we are told that these two together with Shambar the strongest of the Dasyu foes of the Vedics were humbled by Divodasa. But in RV.6-45-1, we come to know that Yadu and Turvashu who

were straying away from the Emperor Sudasa in far off countries, joined Sudasa as his allies. To join Sudasa, these two clans crossed over many streams safely. This shows that they were in the Western Region beyond the Sindhu river and came over to Sudasa who was having his sway in the Ganga-Yamuna region. In Dasharadnya battle, they were the allies of Chayamans and came to the battle front from beyond the Sindhus, but were defeated and had to run away to save their life (RV.6-18-6).

Yadus are famous in the Puranas - Bhagwan Krishna of the Mahabharat War and the author of Geeta-Lord's song, is the very well known descendant of this Yadu - the son of Yayati. Vrajinivata is the grandson of this Yadu. In the hymn RV.6-27-5 to 8 noted above, we find Turvasha allied with Vrichivata. As Yadu and Turvashas are as if Siamese twins in Rigveda, this Vrichivata the ally of Turvasha can easily be identified with Vrajinivata.

Yadus and Turvashus are the Vedic clans, who some times allied with Chayaman and at some other times with the Dasya Chief Shambar and ultimately joined Sudasa who established his suzerainty on Eastern side of the Sindhu and its tributaries.

Shambar is the chief of the Dasyus and the battle fought between him and the Vedic leaders are the subject matter of the Rigvedic compositions by almost all the Rishis. Shambar carried on this warfare for nearly forty years. This information, we get from hymn RV.2-12-11 wherein, it has been stated that Shambar who had his fortresses built on several mountains was ultimately killed in battle fought in the fortieth year. Divodasa and Atithigva were waging wars with Shambar on behalf of Chayamana, and Bharadwaja got a huge gift out of the loot of Shambar's wealth by Atithigva (RV.6-47-22). This we have noted before. In 1-51-5 and 6 we are told that Rijishwan destroyed the towns of the Dasyu Chief Pipru, and Kutsa was saved from the onslaught of another Dasyu Chief Shushna, and Atithigva defeated Shambar.

Hodiwala in his book "Zarathushtra and His Contemporaries in the Rigveda" (published by the author (1913) and referred to earlier) identifies this Rijishwan with Avestan Arjaspas who had fought with Gushtaspa and his zoroastrian followers in Iran. Shushna's clan was from South A. zerbaizan and Shambar was the chief of the clan operating in North Iran along the banks of Sumbar, a small river. In this hymn RV.1-51-5 and 6, a mountain named Arbud is mentioned. It is stated to be very high and difficult to cross. It appears to be the Alburz mountain of North Iran. Scholars now identify Arbud with Abu on the order of Gujrat - Rajasthan States, but as we are able to locate Rijishwan, Shushna and Shambar as the Chiefs operating in North Iran, this Arbud mountain on which Shambar had his fortresses, must be the present day Alburz mountain, of North Iran. This way only, we can get a connected story of the events noted in this hymn. Here Atithigva, the ally of Divodasa is stated to have scored an important victory over Shambar. Divodasa had his base in the Punjab; so when his friend Atithigva is stated to be operating in North Iran,

it was solely because Divodasa and Atithigva enjoyed the trust of the Emperor Chayaman.

When the Vedics established their stronghold in the Ganga-Yamuna region and began to press towards the East and South of the present day Bharat, they began to give the names of the old places known to them, to similar places in the new Bharat. Giving name of Saraswati to a river flowing between the Ganga and Yamuna, and naming the first attractive mountain after crossing the Rajasthan desert as Arbud are cases in point. Rigvedics were already familiar with Himavan i.e. the Himalayas and so when they come across the first mountain with a beautiful lake and bewitching greenery they named it Arbud, after the picturesque mountain Alburg in their old habitat.

Rishi Agastya, the brother of the Great Vasishtha is reputed to be the first coloniser of South India. This Vasishtha is mentioned by the name 'Vahishta' in Avesta (HA 43-15) as the person with the most harmful intellect as he opposed Jarathushtra the Avestic prophet. The hymn RV.7-9-6 gives us the information that Vasishtha killed Jarutha. This may be a symbolic reference to Vasishtha's over-powering skill in subduing Jarathushtra through argument, for Vasishthas, are not noted for their skill in warfare. This Jarutha appears to be the Jarathushtra of the Avesta. The story of the end of Jarathushtra by being killed in fire as given by the Parsis, is corroborated by the Hymns RV.7-17-7 and RV.10-80-3 of the Rigveda. In RV.7-33-3 we get the information that Vasishtha had also to cross Sindhu river to come to Sudasa to serve as his priest. Before this he was obviously operating in Iran and engaging himself in arguments considering matters of religious faith. Jarathushtra is stated to be the Dasyu Governor. In Avesta (Yasna Ha 19 and 18) Jarathushtra besides being the spiritual lord in Ragha (River Rasa of Rigveda) was also the temporal lord-Dakhyuma. Dasyus are not the aboriginal tribes of Punjab as some of the Western Pundits suppose. They are the people who were following a certain faith and were opposed to the Vedic way of life.

In hymn RV.8-5-25, we get the information that the twins Aswinikumar, the physicians of the Gods, showered favours on Rishis Atri and Kanva and the Priyamedha and Shinjar peoples. In 'Cambridge Ancient History' Vol.II p.232, we find these Shinjars as the Shinjar hill people. I quote "Friendly relations were opened by Egypt with the chief of Sengars, doubtless the Sinjar Hills between the Euphrates and Tigris, now occupied by the Yazidis".

There is a consensus of opinion amongst the Indologists that in the distant past, the Vedic and the Iranian people, may even the Greeks, stayed together as one nation known as the 'Aryans'. However, as I have noted at the beginning of this paper, I won't call this nation as 'Aryan' for the word 'Arya' denotes only a civilised way of life and it was the desire of these civilised people to propagate their way of life amongst all the peoples of the world-KRANVANTO VISHWAM ARYAM. I would say that the name given to this nation, was BHARAT and its boundaries were; on the west, the Caspian sea and the river Oxus,

(as Herodotus the Greek historian and Strabo the geographer lay down that this Sea and the nearby mountain Caucasus got their names from the Sage Kaspian - obviously this is a reference to the Sage Kashyap of the Rigveda) and on the North the mountain ranges spreading upto Pamir; on the East spreading over an area, a little beyond Hindukush and the Eastern most tributary of the Sindhu - the Shatadru or Sutlej and upto the Ganga; and on the South of the sea. This outline of the map of the Vedic Bharat cannot be called fanciful as it is based on the internal evidence as collated from Rigveda and Avesta, outlined above.

Prof. Max Muller in his 'Science of Mythology' (p.180) says, "We may go a step further and prove from such equations as Sanskrit - DATA VASUNAM Zend - DATA VAHUNAM - (In Avesta Sanskrit S become H) - and Greek DOTER EAON - 'giver of good gifts' applied to the Devas, that such whole phrases even had been formed by the Aryans in their undivided state and had been preserved as historical heirlooms from generation to generation If some critics look incredulous at such equation as VASUNAM and EAON, I am afraid, we cannot help their unbelief. Here, also, if people wish to live, they must learn." And further on, he says, "We know, that there was a time, when the Aryas of India and Persia were not yet separated and we have historical remains of that period in what the Veda and Avesta share in common, whether in language, in religion, ceremonial and mythology. In that period the old name of God, Asura, must have been the recognised name for Gods, (Ahura=Asura, being the principal element in the name of the supreme deity Ahura-Mazdao) While Deva was not used at all as a name of God or Gods".

That the Iranians, Indians and the Greeks lived together in remote antiquity is, therefore, no longer a matter of dispute. What is in dispute is the period in which this was the state of affairs. The Greeks and along with them, the other Westerners have not preserved any records of this distant past except in a few stray references in their mythology. The Iranians have such a record though not in very clear terms. But they believe that there are very great similarities in language, thought and expression between the Avesta and the Rigveda. The Indians on the other hand have kept very authentic records on this hoary past in the form of Vedic literature, word for word without any interpolation. This is a remarkable feat and the Indians are justly proud of this. While admitting these facts, the Western Indologists and their followers deny the date of Rigveda fixed by Lk. Tilak on unimpeachable astronomical records as preserved in the Vedic literature. This, the majority of the Indian scholars justly resent.

Apart from the date of Rigveda which the Western Indologists hold rightly or wrongly as being about 1000 B.C. as a sequel they hold that the ancestors of the Vedics were undiluted barbarians who destroyed the highly developed Indus valley culture sometime in 1800 B.C. They label these Indus valley people as the Dravidians and so they have sowed the seeds of schism between the North Indians and their southern counterparts.

Archaeologists like Wheeler and Piggot, along

with the anthropologists, philologists and the so called progressive and scientific Historians, have in the field of Indology created a number of myths and have done immense harm to the political and cultural integration of India. The theories proposed by these luminaries are only speculative, and cannot by their very nature be definitive. And yet they have been passed on to us as accepted truths. To quote Dr. H.D.Sankalia, an eminent archaeologist, "doing immense harm in the sequel to peoples and nations - thus the Aryan theory is Germany and the Dravidian in South India." (Prehistory and Protohistory of India and Pakistan p.275).

It is, therefore, high time for us to look into our Vedic records closely and lay before all, the factual history as can be gleaned from these.

I have shown above that Shambar and other Dasyu Chiefs were the actual residents of present day Iran and Afghanistan and they were not the aboriginals of the Punjab, as the Western Indologists hold. These Pundits are not able to see the absurdity of their theory. If these Dasyus were in fact, the aboriginals of the Punjab, how can they be at the same time the highly developed and advanced, Dravidians who could forge a civilization of which even the moderners can be justly proud. If, as they propound that the undiluted barbarians from their home in Central Asia invaded India, how can Chayaman of Abhivarta a place in Iran, be the Emperor of the then Bharat? Even the Avestan Prophet Zarathushtra is called a Dasyu, and the Iranians do not resent this appellation being attached to him. It is obvious that the Dasyus were not the aboriginals of the Punjab, but infact were very respectable people. But the Vedics with their sacrificial religion dubbed them as non-believers in their religion and so they called the Dasyus as Anaryas. It was the endeavour of the Vedics to win them over to their way of life. We find in the Rigveda ample evidence of the alliances forged between the Dasyus and the Vedics. it is possible that these alliances have proved beneficial to both and in the process developed an integrated culture. And this is what we witness in Mohenjodaro and Harappa.

But after the defeat of the Chayamans in the Dasharadnya battle, the capitol of the Emperor Sudas shifted to the banks of the Ganga and the influence of these victorious Aryas over their Iranian counterparts weakened. The Dasyus thereafter appear to have switched over to the Zarathushtrian faith and developed their separate way of life in Iran and beyond. Zarathushtra appears to have improved upon the Vedic sacrificial religion, by retaining the 'fire worship' and avoiding the sacrificial excesses and complexities. The Vedics in Afghanistan, however, retained, their links with the Indians till very recent past i.e. till the advent of Islam in these regions.

So the Indo-Iranian separation came over slowly after the Dasharadnya battle which was fought during the Aditi period (6500 B.C. to 5500 B.C.) as determined by Tilak on astronomical data. The Vedics who followed Vasishtha, Vishwamitra and heads of other Rishis, found this new found land between the Ganga and Yamuna more congenial in climate and very rich in soil. Not

only did they settle there, but they fanned Eastwards and Southwards. Those who came over here, found the lure of their original home in Iran lessening. So the separation between those who were left behind in Iran, and those who had migrated to Ganga-Yamuna region and beyond, became complete after about 1000 years after the Aditi period.

It would therefore, be seen that it was due more to the advantage obtained in this new found region, than the religious schism which brought about their complete separation.

The Greeks were also separated from their brethren in the then Bharata by about the same time i.e. by 5000 - 4000 B.C. Those who were the residents of the regions near the Caspian sea or the Asia - Minor appear to have moved Westwards, and followed the worship of the Sun. Their pre-Christian religion is called Mithraism or Sunworship. They have, however, no recorded memory of these happenings except a few references in their mythology and their belief that the man set his first foot on this mother earth in about 4004 B.C. - the probable date of starting their separate life in Greece and in other regions thereabout. According to Bible this is the date of the appearance of the first human pair Adam and Eve in the garden of Eden.

I have noted above that the Greek historian Herodotus had laid down that the Caucasus mountain and the Caspian sea got their name from sage - Kaspian - Kashyap of the Rigveda. The Western Indologists identify the river Ranga i.e. Raga mentioned in Vendidad (the law book of Avesta) with Caspian sea or some Western river in Iran. Ranga is Rasa of the Rigveda. If Rasa is the Western river in Iran, it may be one of the Sapta Sindhus from which the country is known as Sapta Sindhu Pradesh in Vedic literature.

There is a very interesting story of Fish - Incarnation in the Puranas, and it is also found in the Greek and Iranian mythologies. Let us see the versions of this story one by one.

This story of great deluge or Manu's flood is found in Shatapatha Brahman, Mahabharat and the Puranas. The story in short runs thus:

A small fish falls into the hands of Manu along with water brought for oblations in the morning. When Manu was about to throw it away, the fish requests Manu to save him. In return it promised to rescue him when a great deluge would sweep away all the creatures on the Earth. Manu takes it home in a jar. When it becomes bigger it is kept in a huge vessel. It still becomes bigger and it is then put in a lake and finally it is taken to the sea. The fish asks Manu to construct a ship and take as many creatures and plants and the seeds of different creepers into the ship as possible. When the great deluge sweeps the earth Manu fastens the ship to the horn of the fish. The ship is taken to a safe place near the northern mountain.

The Greek version is more or less the same. There the Prophet Noah has been warned by God of a coming deluge. Noah is asked to construct a ship and keep into it the seeds of all things.

When he does so, continuous rains cause a great deluge. Noah's boat floats on the waters and reaches a place of safety near the mount Ararat.

The Avestic version is more vivid and informative, Jarathushtra asked Ahur Mazdao (Asur Mahadeo) the Supreme God about the person who was given instruction in religious matters prior to him. The Supreme God tells him that it was Yim. The son of Vivanghat who was both the King, the temporal lord as well as the spiritual head. In Rigveda Yama is the son of Vivaswat, the Sun. In Shatapatha Brahman Manu the son of Vivaswat is warned of the coming flood by the Fish Incarnation of the Lord. In Avesta, this Yim is warned of the coming inclement weather and is asked to create a vara - a sheltered place and keep in it seeds of all things, human beings, birds and plants.

The Ahur-Mazdao then tells Yim that the first land he created is Aryanam Veijo by the river Daitya. This means that this first land is called "Seed place of Aryans". This appears to be the first sheltered place by the river Daitya now identified with the river Araxes or Oxus falling into the Caspian sea. The Aryanam Veijo may therefore be Azerbasijan - "The Seed place of the Azer people or the people who worship fire" - the modern Armenia.

Dr. J.P. Singhal in his book - "The Sphinx speaks" (Publishers - Sadgyan Sadan 7A Pandara Rd. N.Delhi 11.1963) has this to say about the Fish Incarnation. "There is to this day a land near this area (Azerbaijan) which is called Mesopotamia. Perhaps the Aryans called it the Matsya Desh or the land of the Matsyas or the Fish. The King of Matsya Desh must have been a powerful person. He organised the exodus of the Aryans from Sapta Sindhu the Daitya Hayagreva to permit the Aryans to remain there". P.27.

According to the Mahabharat, Hayagreva, the Daitya is stated to have swallowed the Vedas at the time of the great deluge. The Fish Incarnation, however, rescued the Vedas from this Daitya and so the continuity of the Vedic - Civilization was thus assured.

In Dasharadnya war the Matsyas side with Chayamana the Emperor of Bharat. Matsya desh may well be Mesopotamia. When did this event occur? According to the Geologists the violent changes of climate bring about Glacial and Inter Glacial Epochs. And such had been the case prior to 10000 years, and the Glacial and Inter Glacial periods extended over 8000 years. This vast period was interspersed by periods of equable and uniform climatic conditions, and during such periods, even the regions around the Pole were habitable. We need not however, dilate on such periods because that is the province of the Geologist. What we can do, is to fix the period just after these Glacial and Inter-Glacial epochs. I mean the post Glacial epochs. The Geologists agree that this must be the case at about 10000 years ago i.e. about 8000 B.C.

There is a remarkable coincidence in the Rigveda. The hymn (10-72) talks about the beginning of life on this earth and then mentions, the creation of the highly evolved people - the Devas. They are the sons of Aditi - the first mother and Daksha, the first father.

According to Puranas the creation in the present Kalpa started sometime before 196 crores of years. Even the Geologists talk about 200 crores of years, as the beginnings of life on this earth. The Puranic account of 196, 0851078 (in 1984) years of the beginning of life on this mother Earth, cannot in any way be dismissed as unscientific.

Prof. R. Mortan Smith, (Ancient Chronology of India Journal of American Oriental Society Vol. 77, PP.116-29-and others) University of Toronto, Canada has this to say, about it:

"There is one independent authority of the period, the Purana, which itself bears witness to the changing atmosphere. Its evidence has been received with an apriori scepticism, partly because it tells of the distant past and partly because it appeared to disagree with the Buddhist accounts. The only valuable work on it in England by Pargiter was treated with an unwarranted rudeness, especially by A.B. Keith, under influence of XIX Century principle that because an oral tradition has been handed down, it is probably wrong. If the trend of recent work on our own dark ages or on the Greek and Roman, has been to rehabilitate tradition, it is quite wrong to refuse that benefit to the Indian. To say that they told nothing but lies is to make high demands on credibility. A priori case for belief for the Puranass has more rational support than that for scepticism.

It is said that work on the Purana is valueless because it can not be checked. There is atleast the test of consistency to check it. It is probable that there is considerably more evidence for the Brahminical writings then has yet been recognised or used to check the Purana."

He further says, "the Indian appears to have had so much historical sense as any one else, though few people of those days might meet the sharpest modern standards. It is very hard to persuade scholars to doubt the texts of the Rigveda, or the Upanishads, although they were preserved from memory for a very long time. It is then reasonable to look at least for traces of such faithful-ness in the Puranas."

Tilak has with the help of the Greek and Parsi traditions deciphered the Vedic records and proved that the Phalguni full moon was once the new year's night i.e. the beginning of winter solstice or Uttarayana according to the Hindu astronomy and ther vernal equinox coincided with the asterism Mriga Shiras i.e. orion. The period indicated by this position of Orion is 4508 B.C. to 3549 B.C

This means that when Phalguni full moon was at the winter solstice, the vernal equinox was in Mrigashiras. Similarly with the Chitra full moon at the Winter solstice, the Vernal equinox would be in Punarvasu. The presiding deity of Punarvasu is Aditi. Now in Aitareya Brahman 1.7 and Taittiriya Samhita 6.1. - 5.1 we are told that Aditi has been blessed with a boon that all sacrifices must commence and end with her. Before this period there was no such tradition, at least nothing is mentioned about it, any where in the Vedic literature.

From this Tilak has conclusively proved that the earliest sacrificial tradition as recorded in the Vedic literature, shows that the annual sacrifice commenced when winter solstice was on Chitra full moon day, vernal equinox was in Panarvasu, this period being from 6428 B.C. to 5469 B.C.

The hymn RV 10-72 mentioned before, further notes of periods prior to Aditi and Daksha, but we have no detailed records of these in the Vedic literature. We however, know that Manu - the son of Vivaswan (the sun) - was the first king of man (RV 10-63-7). Vivaswan had another son named Yama. The Avesta notes Yima (Yama of the Rigveda) the son of Vivanvata was the king when the deluge came and he created a shelter in Aryanam Veijo - the seed land of the Aryans - by the good river Daitya. The region around this river appears to be the place where Daityas - the other sons of Aditi flourished. There is a tradition recorded in the Puranas that Sage Kashyap and his wife Aditi gave birth to two types of sons, (1) the Adityas the Virtuous and the resplendant and (2) the Daityas, the vicious and the strong.

It would, therefore, be clear that both the Vedic and Avestan traditions mention the son of Vivaswan - the Sun - as the first King of mankind in the Post Glacial Period (i.e. post deluge period) beginning from about 8000 B.C.

We have already seen that Rigveda is mainly a prayer book designed for recitation at the time of sacrifices and the composition of the hymns therein has also been completed by about 4500 B.C. though their collection and arrangement in the present form had been finalized by Vedavyas around 3300 B.C. i.e. Just prior to the Mahabharat war (3138 B.C.) As noted earlier, the Dasharadnya battle was fought between Sudas and the then Emperor of Bharat-Kavi Chayamana, around 6500 to 5500 B.C. and Vasishta the priest of Sudas is found to be the contemporary of Jarathushtra.

Parsi scholar H.S. Spencer (Are the Gathas Prevedic and the Age of Jarathushtra - Published H.P. Vaswani Pune 2-1965) discusses at length the reason for fixing the date of Jarathushtra as 7129 B.C. to 7052 B.C. The Dasharadnya battle may have, therefore been fought around 6500 B.C. and Jarathushtra's date may be around this period. This may well be so, as this prophet speaks about his meeting with Ahur-Mazda who recites to him (the prophet) about the exploits of the King Yima, the first king after the deluge i.e. about 8000 B.C.

One can not fail to notice that the Rigveda does not record the names of such famous Puranic personalities, like Sagar, Bhagirath, Ambarish, Harischandra, Rama, Krishna etc. Obviously, the Rigvedic hymns were composed while the composers were still residing beyond Satudri towards the West, and when they migrated to the East of this river, these hymns had been so sanctified as to defy any attempt at interpolation of these. Bhagwan Rama, Krishna considered as the Avatars in the Puranas have no place in the Rigveda at all, for the simple reason that by their time, the Vedas had been so glorified as God's out-pouring that even Rama and Krishna could not defile

them by any addition to them at their dictates. Elephant headed God Ganesh - who is to be worshipped at the start of every auspicious occasion by the Hindus, is not mentioned in the Rigveda. The honour of first worship goes to Ila, the daughter of Manu - Saraswati, the most important river of the then Bharat, and Bharati, the Chief Goddess of the Bharat - people.

This is because the Rigvedic hymns are the compositions of the seers who were more familiar with their old habitats in Iran, Afghanistan and the regions north and West of these countries and had less or no connection with the regions east of Shatudri river.

The Puranas, however, contain a detailed history of the present day Bharat Desh. These also refer to Rigvedic personalities but only to such as had some role in the present day Bharat. Jarathushtra the prophet of the Iranians, or Chayamana the Emperor of the then Bharat have no place in them.

This would clinch the issue and prove my thesis that the present boundaries of the Bharat were not the same of those of the Rigvedic Bharat.

Prof. S. M. Ali in his "Geography of the Puranas (People's Publishing House - N.Delhi 1966) notes that the main object of the Puranas is to compile, bring together and preserve the old traditions which have come down from remote antiquity. He further opines that the India of the Puranic days was not confined to the narrow limits of the present boundaries of India. Their vision was broad and they had knowledge of the geography of the then known world. It is clear from the reference to Nil in Vayu Purana.

Dr. Sampurnanand, ex-Chief Minister of UP and a Vedic Scholar says, "Without sacrificing scientific austerity he (Prof.Ali) has made the book interesting and instructive".

According to Prof. Ali, Pamir mountains can be identified with Meru of the Puranas, and beyond it are the Uttar Kurus and Uttar Madras, the present region of Siberia.

A clay tablet discovered at Bogazkoi (about 80 miles to the South-West of Ankara) in 1906, represents a treaty between the Mittanian ruler - son of Dusratta and the Hittite king in about 1400 B.C. It invokes, among many other gods, four Vedic gods, Mitra, Varuna, Indra and Nasatya. In 1887, there was discovered at El-Amarna in Central Egypt a large number of tablets with writings in cuneiform Characters These contained correspondence between Pharaohs of Egypt in about 1402 B.C. and Syria - Palestine and Mittani Kings. The names of Mittani Kings noted in these tablets were Artatama and Artasummara, showing affinity with Vedic names. In 1884, Friedrich Delitsch had drawn the attention of the scholars to the Arya influence on the language of the Kassites having their Kingdom, just on the north of the Persian Gulf. They were the worshippers of the Sun god named Surias i.e. Surya. The Mittani official in charge of horse - training was designated as Ashwaswami. The numerals used were Sanskrit numerals.

Dr. R.N. Dandekar (ABORI 1969 - p.64) opines that the Hittites appear to have occupied the region between the Caucasus mountain and the Caspian sea by about 2800 B.C.

Dr. Malti R. Shendge in 'The Harappans in Rigveda - The Civilized Demons -' (Abhinav Publications, N.Delhi 6) quotes M. Wheeler the famous archaeologist thus: "The Sargonid period is now agreeably established at 2370 - 2280 B.C. and we know from a number of recent soundings (1964-66) that the occupation of Mohenjodaro goes back to a very considerable way below the levels at which the excavations have recovered materials recognisable on Sargonid sites at Mesopotamia. It may well be that the initial date 2500 B.C. conjectured for Harappans may yet have to be pushed further back by a century or two - Antiquity Vol. XIII - 169 March '69 pp.72-73".

She further states that the findings as Tepe Yahya might ask for a bigger change than that. The Harappan period may be earlier than 3100 B.C. If according to the archaeologists, now the period of so called Sindhu Civilization goes back to 3100 B.C. or even earlier their own pet theory that the Aryans - the undiluted barbarians having come to India in 1800 B.C. or thereafter and destroying that civilization vanishes in thin air. They have no explanation for this gap of 1300 years i.e. between the alleged destruction of the so called sindhu civilization in about 3100 B.C. and the arrival of the Aryas on the scene at about 1800 B.C.

In Assyrian tradition Ashur (Asur of the Rigveda) is the name of the God. It is also the name of the Asur city. Just below Asur was the principality of Akkad whose king was Naramsin (Narasinha of the Puranas).

The scholars are agreed with Sir John Marshall's opinion that there was a common culture from the Indus to the Nile at one time and indicates that the Sumerians were not only to Mesopotamia, but further also to Crete and Egypt. There the Pharaoh Ikhnatum is said to have erected the statue of the Lionman, Narsinha or sphinx (See p.150 - The Sphinx speaks - by Dr. J. P. Singhal 1963).

In Mohenjodaro excavation, a tablet with two men holding a tree and a tree-god extending his hands to them, is found. Western archaeologist Mackay identifies this tree god as Lord Krishna in his boyhood days. This tablet is dated 2600 B.C. This shows that Shri Krishna was popular much prior to that time. This would also show that the Indus Valley civilisation could not have been destroyed by the outsiders. They must have been destroyed in the floods at the time Nichakshu the Pandava King 6th in line from Parikshita. According to Mahabharat Nichakshu was obliged to shift his capital from Hastinapur to Koshambi due to these floods.

The foregoing discussion goes to show that the Vedic influence was all pervasive and it spread right from modern Turkey and Egypt, covered the region between the Caucasus mountain and the Caspian sea down to Syria and Palestine and the Persian Gulf kingdoms of Ancient Babylon,

Asur, Sumer, Akkad, Ur. Kassite and included the Modern Iran - Afghanistan, the Russian Azerbaijan and the Southern regions of the Russian Tadjikistan. It extended further east to Hindukush Mountains and covered the region around Varasakh river and included the Sapta-Sindhu region of modern Sindh, the Punjab and the Kashmir. This was the position in about 4000 B.C. About 2000 years or so earlier, the Dashradnya battle was fought and the Vedics living together in this vast region, began to spread eastwards and southwards is to the present day. India and towards West to Greece, Italy and Northwards.

The capital of the Emperor of the then Bharat at the time of Dasharadnya battle was Abhivarta, a place near Khorasan in Eastern Iran and his sway spread over a vast region described in the preceding para. This region was called Bharat-desha, then.

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Dr. Vijay Bedekar was interviewed by Press Trust of India (PTI) in the month of February 1984. He disclosed the paper of Prof. Marvin Mills to the press and news appeared in almost all leading english news papers of the country (India) on 6th Feb. 1984.

Fraud on Taj?

An emperor's immortal tribute to his beloved, Shahjahan's Taj Mahal at Agra, could be stripped of its proud Mughal heritage with historians on the threshold of uncovering a major architectural fraud, according to Dr. Vijay Bedekar, founder, Institute for Oriental Study at Thane.

Radiocarbon tests on a wood piece procured from a door on the northern facade of the Taj date it at A.D.1359, while the monument is generally believed to have been built between A.D.1638 and 1670.

The discrepancy was detected by a team of researchers at the Booklyn College (USA), a report received at the Oriental Institute from Mr. Marvin Mills, a member of the Middle East Studies Association, North America, revealed.

The validity of this earlier date is, however, limited by the fact that it has been fixed with a spread of 89 years on either side and a 67 per cent probability, the report says. The difficulty of obtaining additional samples from the protected monument also appears to have been a drawback to the investigations.

But supportive evidence has been gathered from the Jodhbai Palaced at Fatehpur Sikri, about 50 km southwest of Agra. While the palace is widely believed to have been built around A.D. 1580, its corrected age agains based on a wood sample comes to about A.D. 1436.

(Contd. on page no. 24)

Archaeometry in the Service of Historical Analysis to Reexamine the Origin of Moslem Buildings

By Marvin H. Mills

Presentation made at the
17th Annual Meeting of the
Middle East Studies Association of
North America
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Archaeometry, the science of dating ancient materials, has become increasingly important to archaeology and history of architecture. Carbon-14 dating has been in use for thirty years. Thermoluminescence, or Tl, has been applied to pottery sherds and sculpture for over twenty years. Recently Tl has been extended to the dating of baked brick. Architectural historians can now use these two techniques to verify insights gained through traditional sources of analysis such as stylistic, epigraphic and literary evidence by dating brick walls, piers and arches and structural timber in medieval buildings.

Radiocarbon age determination has been used successfully by W. Horn on medieval French market halls and English barns. He has achieved results within forty years on either side. But in 1970 he cautioned that there are many environmental contaminants and that the depth of the wood sample in the sapwood or hardwood of the tree should be known if one wants to avoid errors of 150 years or more. Yet, charring of the wood by fire should not affect its use as a dating sample.

Stuart Fleming, Scientific Director of the Museum of Applied Science for Archaeology at the University of Pennsylvania, wrote in 1979 that precisions of 15% plus or minus were already achieved by 1970; that at the time of the writing of his book 6 to 10% was being achieved by the fine-grain method of testing; and that he looked forward to a future precision of plus or minus 3%.²

The architectural historian Martin Kubelik at Cornell University in association with a Tl laboratory in Berlin has reported successful dating of 3% plus or minus on Palladian villas of the 16th century. This precision was attributed to the advantage of dating baked bricks over clay sherds in that the bricks from within walls and above grade were relatively free of contamination from ground water. Over a 400 year interval $\pm 3\%$ comes to 12 years on either side. Of course, before this level of precision can be fully accepted other Tl laboratories would have to achieve similar results. In any case, the process has been applied systematically and the precedent established that the dating of brick in periods as late as the Renaissance can be reliably achieved within some useful spread of years.

The technique for collecting samples for both C-14 and Tl in situ while doing the least damage to the building is basically the same for both. The basic instrument is a core drill of about 1/2" diameter capable of automatically penetrating from 2 to 10 inches into the wood beam or brick wall and able to extract a pencil-like sample that can be used for several tests along its length. The materials

can be stored in black polyethylene bags after proper identification and photographing to properly note the place and time of sampling. A piece of the end of the sample can be used to plug the hole to conceal the slight damage.

There is a third and, for the present, most precise method of scientific dating called dendrochronology which bases its results on the matching up of tree-ring patterns and is able to date a wood beam to one year. Actually, that year would be the date the tree was felled, not when it was finally used for construction. The same assumption is made in all three techniques that construction began immediately after the preparation of the building material. Nevertheless, this method will probably become most prevalent. But its usefulness depends on an established tree-ring chronology for the region in which the tree grew. Many areas of the world, including most Islamic countries, are still not covered by chronologies that would allow for successful use of this method. Professor Peter Kuniho of Cornell University is very active in developing and extending these chronologies in Greece and Turkey and has already made interesting datings of Turkish medieval churches.

Therefore, we can safely say that the state of the art of archaeometry is ready for application to Islamic ancient monuments. Up to the present there has been no significant amount of scientific dating even though thousands of Islamic medieval monuments from the 7th to the 18th centuries await verification of their accepted dates and phases of construction. The question naturally arises: Is there a need? Are we being redundant? Have the traditional means of establishing dates failed in any way? My investigations indicate that the usual means are lacking. We know that the basic sources of information concerning Islamic monuments are derived from writings of the Moslem chronicles in the employ of the emirs, khalifs and emperors. Naturally, these historians were under great pressure from their patrons to claim that buildings often appropriated from subject peoples were original works of their benefactors. This Cartesian doubt concerning the alleged origin of many Islamic medieval buildings can be the generating force for the introduction of new methods of dating from the physical sciences that can firmly establish which structures are originally Islamic and which are converted, reworked or simply renamed. These new methods can also, in many cases, give greater precision and accuracy to our knowledge of the phasing of construction.

The need to unite science and history of architecture is appreciated by David King of the Hagop Kevorkian Center for Near Eastern Studies of New York University. He focuses on the question of the orientation of ancient Islamic mosques. Surprisingly, he asserts that the majority do not face Mecca. His basic assumption is that those are original Moslem buildings. He then searches the ancient Arabic literature for explanations as to why their qibla is not towards Mecca. It was Mohammed's directive as written in the Koran that the faithful should face Mecca when praying. King explains that there were basically

two methods for determining the qibla. The first was the mathematical and astronomical method. The Moslems were the world's leaders in these fields in the Middle Ages. Thus, by the ninth century they were able to calculate the direction of Mecca within two degrees from any city. The second method, which he broadly refers to as "folk astronomy" began in the pre-Islamic era and based itself on local traditions and on pre-Islamic science which derived the orientation of buildings on the position of the sun, moon and stars in their risings and settings at the solstices and equinoxes.

Thus, King explains, a local religious leader's interpretation of these folk considerations could have, and apparently did, take precedence in determining the qibla on a non-mathematical basis. Thus, if tradition in a city, as interpreted by the local imam, was that south was the traditional sacred direction perhaps because Mecca was south of Medina or Damascus, then south it would be. By researching ancient Arabic sources King has been able to find writings that justify particular qiblas other than towards Mecca. But the writings are mainly after the accepted date of construction. Therefore, they could not have been specifications for construction but were, instead, rationale after the fact. A building may indeed have been oriented to the heavens but we are still left in doubt as to when it was built and by whom. Only archaeometry can finally resolve the question of "when". A new "when" may require a fresh start in historical research to determine "who".

Two specific potentially fertile monuments for the application of archaeometry are the Taj Mahal and the Taj complex faces due west whereas Mecca from Agra is 14 degrees 55 minutes south of west. It is oriented to the cardinal directions as would be typical of a Hindu temple in India. Is it conceivable that the Taj is not of Moghul origin? There are very few scholars that question the Islamic and Moghul origin of the Taj. But there is a scholar in Delhi named P.N. Oak who is president of the Institute for Rewriting Indian History, who emphatically denies its Moghul provenance. He asserts that the Abdul Hamid Lahori court chronicle of the Shahjahan rule of India called the *Badshahnama* has a very revealing passage. Oak's English translation of the Persian is as follows :

"... that Queen of Queens (Mumtaz) was brought to the capital (Agra) ... and the site, extremely lofty, full of verdure which prior to this was the palace of Raja Mansingh and at present belonged to the Raja Jaisingh, grandson of Mansingh, was selected for the burial of the queen ... although Raja Jaisingh valued it greatly as his ancestral heritage and property ... In exchange for that grand palace Jaisingh was granted government land ... The illustrious body of the queen was laid to rest under the sky-high lofty mausoleum ..."6

However, Dr. Peter Chelkowski, professor of Persian at New York University's School of Near East Languages and Literature claims it has an opposite meaning. He says that the passage does say that a site with a building on it was acquired by Shahajahan from Raja Jaisingh but the queen was buried in a new crypt and the Taj tomb was built over her head. If his version is accurate it would be strange for the queen to be in her final resting place while for twenty years construction went on all about

her. Apparently the passage is not clear in its meaning but it does raise the possibility of the building being acquired rather than built.

Another item of evidence concerning the alleged date of the Taj is adduced from a radiocarbon date from a piece of wood from a door on the north facade on the Jumna River's bank. The sample was tested by Dr. Evan Williams, Director of the Brooklyn College Radiocarbon Laboratory. The date came to 1359 A.D. with a spread of 89 years on either side and a 67% probability, Masca corrected. Since the period of construction of the Taj is generally accepted as somewhere between 1638 and 1670 this earlier date of the sample is very interesting.

Evans also dated a wood sample from a door from the Jodhbai Palace at Fatehpur Sikri, twenty-three miles to the southwest of Agra. It produced a Masca corrected age of 1436 A.D. $\pm$ 64 years. The accepted date of Fatehpur Sikri's completion is approximately 1580.

Dating of the Taj should be given the highest priority. But recognizing some of its anomalies is also important. For example, what is generally accepted as the mosque does not have minarets whereas the tomb has four of what appears to be minarets. And there is a mirror image building of the mosque to the east of the tomb whose function is not clear. From an architectural point of view this would mean that either the mosque is lacking in fitness to function or its mirror image.

Note, too, that the Taj is a fortified complex. Why a tomb had to be fortified is not clear. But if Shahjahan decided to protect it from adversaries then why did he build it with steep masonry walls topped by crenellations? Artillery had been used successfully by the first Moghul emperor Babur in his successful assault on Panipat in 1526. There is no functional reason why more than 100 years later this knowledge of warfare should not have been reflected in the design of the walls surrounding the Taj. Artillery salients were typical of 17th century fortresses. There was a radical change in the character of walled defenses after the introduction of artillery into warfare.

These walls surround a complex of hundreds of rooms on many levels which suggests that its original purpose was to be a palace accomodating many visitors. There are about 17 rooms at the lower level facing the Jumna River. The grilled openings to the river have been blocked up long ago. Why are two doorways along their corridor bricked up? What is behind these doors? Oak suggests that Hindu idols and symbols were removed by Shahjahan from the walls of this former temple and stored there out of sight.

Without emunerating all the problems concerning the Taj, such as the many obvious examples of Hindu symbolism, it should be obvious that the only way to put these legitimate doubts to rest is to apply scientific dating to determine, as a minimum, the century of origin. It may be that many buildings in India assumed to be Islamic will turn out to be from time periods preceding the Moslem invasions.

A similar posture of skepticism should be adopted towards the Mosque of Cordoba in Spain. We have

so little concrete evidence as to its origin that a definitive assertion at this point as to its Moslem provenance should be viewed with some doubt. With the support of the Director de los Reales Alcázares de Sevilla, who is responsible for the preservation and restoration work at Cordoba, I was able to obtain three wood samples for radiocarbon dating at Dr. Williams laboratory.

Sample #10 was cut from a 10"x10" beam stored in a room along the west wall of the prayer hall which the director believed to be originally from the third phase extension of al-Hakam II 961-967 A.D. The date came to 1260-1390. Therefore, there is little likelihood that this beam was from the original mosque.

Sample #11 was stored in the Museo Casa Real of the Medina Azahara, the palace city of the caliphs of Cordoba believed to have been constructed by Abd ar-Rahman III. Its range, as dated, came to 1060-1190. It seems that the piece may have been from a later addition or rework of the palace.

Sample #12 was also a piece of wood stored in the Museo Casa Real whose range dated 980-1090. This result is close to the accepted dates of construction.

The samples do not pre-date the Moslem era in Spain which begins with the conquest of 711 A.D. nor do they coincide with the accepted construction dates. What is most important, not being taken in situ their results can not be conclusive. All efforts are being made to gain permission to gather in situ samples from these sites.

Doubt as to the Moslem origin of the Mosque of Cordoba begins with the fact that it does not face Mecca. David King tells us that "In Cordoba, for example, as we know from a twelfth century treatise on the astrolabe, some mosques were laid out towards winter sunrise, because it was thought that this would make their qibla walls parallel to the north-west of the Ka'ba. The Grand Mosque of Cordova faces a direction perpendicular to the summer sunrise for the very same reason; this explains why it faces the deserts of Algeria rather than the deserts of Arabia."¹⁰ Mecca is 10 degrees 14 minutes southeast of Cordoba. The mosque orients approximately 30 degrees east of south. Therefore, it misses Mecca by about 50 degrees. The Mosque of Cordoba and the Ka'ba may possibly be oriented towards the heavens in the same direction for the same reason but it does not follow that the mosque based its orientation on a Moslem veneration of the Ka'ba.

Other questions concerning this building are troublesome:

1. How can we be sure that the original Roman temple and the Christian cathedral that it was converted to are not in part, or for the early acquisition of the site by Abd ar-Rahman I is based on the later writings of al-Razi as interpreted by Ibn Adhari and al-Maqqari. Creswell considers this whole anecdote, which so curiously parallels the acquisitions of the Mosque of Damascus, as just a legend.¹¹

2. From the viewpoint of architectural planning it seems strange that the first stage of construction by Abd ar-Rehman I and his son Hisham I

in 788 was not built on the Guadalquivir River which would have given the mosque ready access to the then existing Visigothic Alcazar to its west and it would have gained immediate access from the ancient Roman bridge. If both the Christian cathedral and the Visigothic palace were rebuilt by Abd ar-Rahman I why were they not built opposite one another so that a bridge connection between palace and mihrab could be included, as was done at later stages? If the first three stages were built in reverse order it would have provided a means of expansion without continually destroying and rebuilding the mihrab at each successive stage.

3. Why, according to Lucien Golvin, is there no evidence of a construction joint in the west wall between stage one and Abd ar-Rahman III's expansion of the court to the north in 958 for 24 metres?

4. Why is there no evidence of a mihrab in stage one? ¹³

5. There is a relatively consistent stylistic treatment in the four stages though it was presumably built over a 250 year period. These include horseshoe arched doorways with alternating red and white voussoirs, stone construction techniques and sizes, roof crenellations and double-tiered interior arch supports. Did each regime faithfully repeat the prevalent style or does this point to a more common time of construction?

6. Why did the mosque take its curiously elongated shape with the addition of stage three which is one that is not typical of mosque layouts? A mosque works best if it has a rectangular sanctuary with its short axis centered on the mihrab.

7. Why do the facades have battlements and bastions which suggests a fortress-like appearance and function?

8. Why was the original minaret built by al-Hikam I rebuilt by Abd au-Rahman III with curious large gold and silver fruit and lily leaves decorations at the top which is not in keeping with Moslem practise of abstract decoration and simple forms? ¹⁴

9. Why are so many of the interior columns and capitals in the Visigothic and Roman styles? Were these actually reused parts from older buildings or are we looking at original construction?

10. How were the Moslems of Spain able to decorate the mosque in such intricate and beautiful mosaics when, according to Ibn Idhari, only one mosaicist was brought in from Constantinople who taught two slaves and returned home. According to Terrasse, being an infidel he was probably not even allowed in the mosque.¹⁵

These questions have not been satisfactorily answered by historians of Islamic architecture and some may never be. In the future such analysis must begin with scientific dating. The dating of bricks and wood beams, but also wood panels and ceramic tiles, can establish the period of construction within acceptable tolerances. Verification of the phasing of construction, such as the four stages of the Mosque of Cordoba, can be achieved this way.

The propensity for Moslem medieval regimes to

have occupied and modified existing buildings must not be underestimated. This, of course, does not mean that they did so in all cases. The record of magnificent Islamic achievements in architecture has been firmly established in large areas of the world. But there never were religious prescriptions against taking over Hindu, Roman or Christian buildings and converting them to sacred Islamic mosques and tombs. From India to Spain, including Afghanistan, the Near East, Iran and North Africa there is the need to verify the dates of origin of ancient Islamic buildings by scientific dating methods.

The very exercising of those disciplines will provide an invaluable check and cross-check on the traditional means of gathering evidence which will be at least as accurate. Successive application of these techniques will increase their precision. Undoubtedly, at some point in the near future historians of Islamic architecture will automatically use scientific dating methods on ancient monuments under their investigation before proceeding with further analysis.

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- 11 - K.A.C. Creswell, Early Muslim Architecture, Beirut, reprint 1968, p.213
- 12 - L. Golvin, Essai sur l'Architecture Religieuse Musulmane tome 4, L'Art Hispano-Musulman, Paris, 1999, p.59. In discussing the stages of the mosque's construction he writes :

"Elle se divise en plusieurs sections correspondant l'histoire du monument. La premiere qui va de l'angle nord-ouest au gros pilier correspondent la facade de la salle de priere (profondeur de la cour) ne peut etre homogene puisque nous savons que Adb ar-Rahman III avait procede a un aggrandissement vers le nord u cahn. Poutant, on ne peut relever actuellement aucune trace de cesure entre ce qui fut le mur primitif et le second."
- 13 - M. Terrasse, L'Art Hispano-Mayresque des Origines au XII Siecle, Paris, 1932, p.68. He comments on the mihrab of stage one and the Arab chroniclers : "... les auteurs ne nous disent rien".
- 14 - L.Golvin, op. cit., p.71 : "Au haut de la tour, sur la coupole qui couronne la chambre, il ya trois pommes en or et deux en argent accompagnees de feuilles de lis." (quote taken from al-Idrisi)
- 15 - H. Terrasse, op.cit., p.17.

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Question Box

Question for this issue:

Was Dentistry known as a science in ancient India?

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Life and Death, Some Reflections on Yama in the Veda

By Dr. Lourens P. van den Bosch

In the history of Indian religions Yama is a fascinating and much disputed figure. The interpretation of his character has led to many diverging opinions among scholars in the field of Vedic studies. These different opinions are closely linked with the fact that the Vedic textual traditions concerning him are very fragmentary and incomplete. Discussion between various authors was especially aggravated over the question of how one could reconstruct his 'original' character and the various stages of its development in the course of time. Though it is generally acknowledged that Yama has his origin in at least the Indo-Iranian period, tradition concerning him is also found in the Avesta. (2) It is more difficult to develop criteria for evaluating the scattered fragments with reference to each other. The conclusions of the learned authors are, therefore, largely determined by their own choice and appraisal of material for interpretation. Which traditions should be regarded as 'original' and which as 'secondary'? Arrangement of the data in view of a coherent reconstruction is determined, moreover, by the theoretical positions of the various authors. This implies that some traditions have been qualified as 'original' on account of theoretical considerations. This is especially the case with those scholars who used the 'naturalistic' theories of their day in their explanation of the gods. Though their position is nowadays generally considered to have been superseded by more recent developments in the science of religion, I shall summarize their positions before dealing with the three other positions which can be distinguished with reference to the interpretation of the 'original' character of Yama. After this survey I shall trace in outline my position.

Scholars working in the line of the nature myth school, of which F. Max Muller was the most important representative, were of the opinion that the gods 'originally' were no more than personified natural phenomena. (2) All gods were reduced to manifestations of the sun, moon, stars, dawn, spring renewal, mighty rivers, etc. According to them, Yama would originally have represented a manifestation of nature, but there was not the slightest unanimity among them as to which manifestation he represented. Kuhn (1859, p.208) and Bergaigne (1878, p.89 sqq.) were of the opinion that he was a form of Agni, the god representing fire. Bloomfield (1908, p.105) and especially Ehni (1890 and 1896) however, stated that Yama originally represented the sun and should be regarded as a sun-god. The sun, during or after sunset, was the 'naturalistic' basis, from which Yama could develop. As god of the setting sun he became ruler in the realm of the hereafter. The same idea was put forward by F. Max Muller (1891, vol.II, p.634 sqq; 1892, p. 219 and p.224). Yama represented the setting sun and as such he could develop into a god of the dead. Weber (1894, p.1 sq) slightly nuanced this conception and regarded Yama as a god of the 'parting' day. Hillebrandt (1965, vol.II, p.146 sqq), on the contrary, came to a totally different conclusion. According to him, Yama must 'originally' have been a moon-god, but his argumentation is extremely poor. He admits, however, that in the Veda Yama is the king of the terrestrial paradise or of the realm of the Blest. (3) Since these opinions have frequently been criticized by other scholars, I need not dwell on this point and refer for the sake of brevity to Dandekar's short review. (4) Generally one can say that the tendency of the nature myth school to reduce the gods and other mythical beings to natural phenomena, and to stress those textual data which offer a starting point, even if they are extremely few, leads to a neglect of the majority of traditions, which are regarded as 'secondary' or mythical accretions. The convention of the Vedic poets, however, of using in their description of the gods metaphors relating to natural phenomena, need not be regarded in itself as an indication of their 'original' identity.

The second position is held by a group of scholars who adhere to the opinion that Yama was the first human being. As such he became, together with his sister Yami, the progenitor of the human race. Hence he is regarded as the first sacrificer and also as the first ruler and king on earth. Because Yama was the first human being on earth, he was also represented as the first to die, for it is explicitly stated in the Vedic texts that Yama was a mortal being. The tradition describes him as first among the mortals to die and find along the mighty steep the path to the hereafter. As pathfinder and guide he became king in the realm of the hereafter and ruler of the deceased ancestors. According to Roth (1850, p.425 sqq; 1876, p.392 sq.), Yama was 'originally' conceived as the first human being. Hopkins (1895, p.127 sqq.) worked along the same line and sketched the same aforementioned image. He regards the connections of Yama with the realm of the dead and ancestor worship as 'secondary' developments. Oldenberg (1917, p.280 sqq; cf. also p.532 sqq.) begins his discussion with the observation that Yama is especially regarded in the Veda as the ruler of the dead. This position he acquired because he was the first representative of human existence to die *in illo tempore*. The author tries to trace the myth of the primeval pair Yama and Yami with the help of ancient Iranian traditions. In the Avesta Yama is imagined to be the king of the golden period in which there were no infirmities of old age or death, nor heat or cold temperatures. However, these ideas do not occur in the Veda and it is therefore difficult to demonstrate that they belong to the Indo-Iranian period, as Oldenberg himself admits. Scherman (1892, p.122 sqq.) discusses the character of Yama within the context of the ancient visionary literature of India. In this literature he is frequently represented as the mighty ruler of the deceased ancestors. That position he acquired by being the first among mortals to die. The author considers Yama as a mediating figure between the world of the gods and that of mankind. The idea of the first man and progenitor of the human race is closely connected with the conception that he sprang from a divine origin. According to Scherman, it makes no difference with respect to the result whether the first human being was conceived of as a god, or whether the last god was already

of as a god, or whether the last god was already

represented as a man. It is without doubt that the first man Yama also was the first to die. The author objects to the opinion that Yama, as lord of the deceased ancestors, in Vedic times, was only represented in a heavenly paradise, while he was known in later times as king of the underworld. According to him, both ideas occur in Vedic texts.

Dandekar (1979, p.118 sqq) has developed a new position in the discussions concerning Yama. In his theory he tries to remove the objections against the two former positions. He is of the opinion that Yama's personality cannot be explained satisfactorily on the basis of the sun-theory, the moon-theory or the first-man-theory. Yama should not be regarded as the first man, for he is never explicitly called a man, but is characterized as a 'mortal' (*martya*). Moreover, there are clear instructions of his divinity. According to him, Yama possesses in Vedic mythology the peculiar character of a 'god-man'. Dandekar objects to the arguments that Yama died first because he was born first. In the RV it is explicitly stated that Yama immolated himself as a necessary condition for the procreation of mankind. As a clue for this interpretation R.V. 10.13.4 is cited, which is rendered as follows :

"For the sake of the gods, verily, (he) chose death; he chose not, indeed, in the interest of progeny, a life immortal. They (the gods) made Brhaspati, the Rsi (himself), sacrificial offering. Yama surrendered his own dear body."

For the moment I shall refrain from commenting this translation, which is not very clear, to say the least. Dandekar makes the following reconstruction of the 'original' character of Yama. In the beginning the gods organised a sacrifice for the sake of the creation of the universe and the procreation of the human race. On that occasion one of them, Yama, surrendered his own dear body for sacrificial immolation; in this respect Yama is different from the other gods. By this act of self-immolation he served both the cause of the gods and progeny. Yama is identified in this context with Brhaspati. Dandekar is of the opinion that the cosmogonic motif of the primeval sacrifice of the 'god-man', as found in the relatively late Purusasukta, is a more detailed and elaborated priestly form of the older-motif of the immolation of Yama. The problem with this statement is, however, that Yama in the whole tradition is nowhere identified with the primeval giant of R.V. 10.90 nor with Brhaspati.

To corroborate his opinion that both Yama and Purusa belong to the same conception of primeval giant, Dandekar states that both are hermaphrodite. Because it is not clear without ado that Yama possesses male and female characteristics, he appeals to linguistic arguments. Following the German scholar Guntert (1923, p.326 sqq; 334), he comes to the conclusion that the name *yama*, among others, may originally have denoted a hermaphrodite. This primitive conception of a primeval androgynous being as the creator of the sacrifice and the progenitor of the human race would have been the first stage in the development of the Yama mythology cf. also Lincoln: 1981. Against this reconstruction the following objections can be made : the word *yama* nowhere denotes 'hermaphrodite' in the ancient Sanskrit tradition; moreover, this meaning is at

least uncertain in the Indo-European languages, pace Guntert; (see e.g. mayrhofer; 1956-1976, sub voce) finally it should be added that Yama, as far as I can see, nowhere occurs as a hermaphrodite being. Such a significant factor in Yama mythology would not have sunk into oblivion while other data were so carefully preserved.

The second stage in the development of Yama mythology is that of the separation of the primeval giant into a male and female halves. These two became regarded as twins and the first parents of mankind, viz. Yama and Yami. With this development Yama's original function as creator of the universe became considerably restricted. In the dialogue between Yama and Yami in R.V. 10.10 ancient traditions of this stage have been preserved, though in a context which is clearly later. The priestly poet takes a stand against the incestuous relation between the twins and simply denies it by introducing Yama as a man of honour who resists the lustful sexual desires of his sister. Dandekar considers the hymn as an obvious example of afterthought.

The strong prejudices of conventional priests against the myth of an incestuous was no longer regarded as the leader of the human race and the king of an earthly paradise. Instead of him, a new figure was introduced according to Dandekar who is characteristic of the third stage, viz. Manu. Because he was not tainted by the suspicion of incest, he became sponsored by the Vedic priests. Yama lost his function as first sacrificer and became mainly connected with the hereafter. He is the ruler of the heavenly paradise in which the deceased ancestors abide. While Manu was regarded as the 'first born', Yama was the first to die. He left his earthly paradise to discover the path to the realm of the hereafter. This realm is localized in the heavenly regions. Dandekar summarizes this stage as follows:

"Yama is thus primarily regarded as a legendary king, who by his holiness, was enabled to establish a realm of immortal life and bliss for the righteous of olden time, to which good men of all generations had the right of entry. In most RV passages, he is chiefly celebrated as the king of the blessed dead ... Later, however, we see Yama's character in the process of change to his post-Vedic role as the horrific judge of the dead. He is brought in close connection with Death." p.120.

In the last words of this quotation the fourth stage in the evolution of the Yama mythology is indicated. Under the influence of the primitive cult of the dead Yama would have acquired terrifying aspects. Dandekar thinks that the mythology of Rudra significantly influenced that of Yama. The conception of the two dogs guarding the region of the dead would have been connected with Yama. The king of the heavenly paradise became the god of death and an object of terror. The popular derivation of the word *yama* from the root *yam*, i.e. 'to restrain' would have facilitated this development.

As I have shown above the first reconstructed stage in the Yama mythology is highly improbable, but one may ask oneself if the suggested development of the following stages is feasible. Why, for instance, are the data relating to the fearful aspects of Yama historically later than those relating to the primeval pair? Because they fit into Dandekar's

reconstruction? The fact that some data should have mythological priority does not imply that they should also have historical priority. Moreover, one may ask oneself whether it is methodologically justified to reconstruct Yama mythology without regard for its ritual context, because most of the traditions concerning Yama are clearly related to rituals connected with the next world, e.g. the funerary rituals.

The fourth position in the discussion on Yama's 'original' character is represented by the Scandinavian scholar Arbman (1927, p.339 sqq; 1928, p. 187 sqq). He put forward his ideas in two lengthy articles, which primarily dealt with death and immortality in Vedic belief. Because his subject was more embracing, his ideas concerning Yama were not always heard in discussion.

Arbman builds upon the ideas of Oldenberg concerning the hereafter as represented in the funeral stanzas. Oldenberg (1917, p.543 sqq.) already observed that originally there must have existed a clear distinction between the world of the gods and that of the deceased ancestors. In the Vedic funeral rites there are many indications that the world of the dead originally was located beneath the earth. The souls of the departed ancestors were incorporated in this realm of the dead, which is identified with the realm of Yama. The heavenly paradise does not fit very well into this picture, for it suggests a close connection between the world of the gods in heaven and the deceased ancestors. Oldenberg thinks that the location of the hereafter in heaven, where Yama revels together with the gods, is 'secondary'. This innovation was due to the wishes of the privileged class to continue their power and glory in a heavenly paradise together with the gods. This localization of the privileged souls in heaven may be connected with an alteration in the funeral practice whereby the favoured class preferred cremation to an ordinary burial because it offered a road to heaven.

Because Oldenberg's ideas did not get the attention they deserved, Arbman gives a broader foundation to them. (5) He begins his description with the conception of the hereafter according to the AV. because these texts represent the ideas of broad strata of the population. In this connection he especially pays attention to the prayers for the exemption from the dangers of death and disease. (6) The realm of death is represented here as a dark place beneath the earth in which the dead lead a gloomy existence. This place should not be confused with Hell because it is the destination of all dead persons. In the prayers the soul of the unconscious patient is called back from the dangerous dark regions where Yama rules over the deceased ancestors.

Since this is not the place to deal with all the aspects of Arbman's two lengthy articles, I shall confine myself to his opinion concerning Yama. He makes it clear that the texts of the later *śamhitās* and *brahmanas* show that the people of the Vedic period knew another Yama as the kind lord of the heavenly paradise. Yama manifests himself as a god of death and a ruler of the netherworld. This dark and terrifying Yama has nothing to do with heaven. The ideas which occur in the popular tradition are also found in the hieratic R.V. They form as it were an old layer upon which new ideas

concerning the hereafter of the privileged class are erected. The priests introduced heaven as the place where the blessed dead revelled together with Yama on account of their pious acts. This place was especially destined for those favoured people who could pay the high costs of the priestly sacrificial cult. With the introduction of heaven the old subterranean realm of the dead acquired negative qualifications. This led in the course of time to the development of the concept of Hell. Arbman, however, makes a clear distinction between both concepts. The majority of the texts refer to the subterranean realm of the dead and not to Hell. (7)

Mention is often made of two paths, viz. the path of the gods and that of the deceased ancestors, the Fathers. The one connects this world with the heavenly realm of the gods and the other with the subterranean realm of the dead. The privileged Fathers go along the path of the gods, but this is clearly a later development, according to Arbman, R.V. 10.18.1, a funeral stanza, gives expression to the older ideas.

"Go away, O Death, along a distant path, which belongs to thee and which is distant from the path of the gods. I say unto Thee, who has eyes and ears, do not harm our children, nor (our) heroes."

This notion of a dark subterranean realm of the dead can be readily connected with the idea of the two dogs of Yama, which are very opposite to a heavenly context. (8) Dandekar was also aware of this anomaly and tries to explain it as a 'secondary' development in order to save his evolutionistic reconstruction.

In my opinion it is one of the strong points of Arbman that he placed the textual traditions concerning Yama and the realm of the hereafter in a ritual context, for the development of ideas concerning the ruler of the dead did not take place independently but was influenced by alterations in the funeral practice and representations of the hereafter. Arbman, however, was not very successful in his explanation of Yama as progenitor of the human race. He was of the opinion that Yama's dignity as ruler of the deceased ancestors should be regarded as 'original', from which the myth of Yama as first among the mortals and the progenitor of the human race is a 'secondary' development. This view is in my opinion too dependent on the idea that Yama must always have been a god of death. However, it has been frequently observed that Yama is not a god, nor a human being, but a mortal (*martya*). Moreover, it does not seem correct to me to contrast Yama as god of death and founder of the subterranean realm of the dead with Yama as first among the mortals and progenitor of the human race. The author's argument that this last Yama is only a mythic figure and a product of poetic phantasy is not justified because it fails to appreciate that many of the mythological fragments are collected together with the stanzas which are used for the funeral ritual. They should therefore be placed within the broader context of these rituals. In this respect these fragments have belonged to the living religious tradition as well as with those concerning Yama, the lord of death.

So far I have discussed the four main positions of various scholars in the field of Vedic Studies

with reference to the interpretation of Yama. In my criticism of them I have implicitly demonstrated some of my own ideas. In the following pages I shall expound my view more fully. I would like to start by establishing the fact that most of the data concerning Yama and his mythology occur in textual traditions relating to funeral ceremonies and rites in honour of the deceased ancestors and for exemption from the dangers of death. In my opinion this is a significant fact, for it indicates that the Yama mythology should be related to questions which arise in that particular context. It is a context in which the dead remind the living about the instability of earthly existence and the power of the realm of death. The rites are performed to keep or to restore the balance of power between the living and the dead.

There are arguments to state that originally the priests were not especially interested in the aforementioned rituals. The belief conceptions relating to Yama and the deceased ancestors lay beyond their intellectual horizon. This becomes clear from the fact that the old hieratical family 'books' (mandalas) of the R.V. scarcely contain any passage relating to them. Yama, for instance, is mentioned only once in connection with the institution of sacrifice. (9) The majority of the traditions is collected in the relatively late tenth 'book' of the RV. This book has a supplementary character and contains those traditions which could not be inserted in the family 'books' because they already had taken a definite form. Its compilation took at a relatively late stage, but this does not imply that the compiled material is newer than that of the family 'books' (10) Old folk traditions were noted down together with more recent traditions, such as e.g. the Purusasukta.

The collection of R.V. 10.10-18 contains important data with reference to Yama mythology, mostly in the context of funeral ceremonies. It is attributed to the mythical seer Yama, the king in the realm of the dead (11) and is unique in that it has no parallels in the other books of the R.V. Most of the texts in this collection are also found in the 'book' of funeral hymns of the AV. - 'book' 18 - representing the more popular traditions of the Aryan population. (12) The fact that the funeral stanzas are collected in the supplementary 'book' of the RV., and also in the AV., indicates that a substantial part of Yama mythology functioned primarily within the context of the popular funeral tradition. Since the priests were not initially involved in such rituals they did not incorporate such stanzas in their family 'books'. When they became interested in the funeral ceremonies, they created their own liturgical traditions for them, in which they incorporated the old folk traditions concerning Yama and the hereafter. This mixture of old popular traditions and later hieratical conceptions is preserved in the compilations of RV. 10 and AV. 18 and gives them a complex character. This complexity is reflected in the various conceptions of Yama and the deceased ancestors, the Fathers. Sometimes they are imagined as lofty beings in heavenly regions, but they are also located in a gloomy subterranean realm and represented as ambiguous figures. (13) Sometimes these diverging and contrary ideas are found in one and the same hymn of the RV.

The popular ceremonies performed to avert the

dangers of fatal diseases offer a good starting-point for unravelling the intricate problems concerning the conceptions of the hereafter, as is clearly shown by Arbman (1927, p.350 sqq.). The hereafter is nearly always represented in them as a dreary subterranean realm. The path of the Fathers leads to that gloomy place. As, for instance, in AV. 8.1.1, 3-4, 8-10, 19 :

"To the 'Ender', to Death be reverence! May thy in-breathing and thy outbreathing remain here! United here with (life) spirit this man shall be, sharing in the sun, in the world of immortality./1

Here shall be thy (life) spirit, here thy in-breathing here thy life, here thy mind! We rescue thee from the toils of Nirrti by means of our divine utterance./3 Rise up hence, O man! Casting off the foot-shackles of death, do not sink down! Be not cut off this world, from the sight of Agni and the Sun!/4

Do not long after the departed, who conduct (men) afar! Ascend from the darkness, come to the light! We lay hold of thy hands!/8

The two dogs of Yama, the black and the brindled one, that guard the road, that have been despatched, shall not go after thee! Come hither, do not long to be away; do not tarry here with thy mind turned to a distance!/9

Do not follow this path: it is terrible! I speak of that by which thou hast not hitherto gone. Darkness is this, O man, do not enter it! Danger is beyond, security here for thee!/10

I have delivered thee from death. The (powers) that furnish strength shall breathe upon thee. The (mourning women) with dishevelled hair, they that wail lugubriously, shall not wail over thee."/19

Transl. Bloomfield : 1897, p.53 sqq.

Life in the hereafter is associated in this popular representation with darkness and the downward path to that realm is terrible. The spirit of the patient is summoned to ascend from the darkness to the world of light. The deceased ancestors are introduced here as dangerous figures who conduct people from the world of the living to the realm of the dead. The two fearsome dogs of Yama, that guard the road to this subterranean realm, fit very well into this picture. Sometimes these two messengers catch the soul and conduct it downwards to the realm of Yama. The 'Ender' and Death occur in this context in close connection with Yama. In AV. 5.30-11-12 the spirit of the senseless patient is called back with the words :

"Agni is here to be revered; the sun shall rise here for thee: rise thou from the deep death, yea from black darkness!/11

Reverence to Yama, reverence to Death; reverence to the Fathers and to those messengers that lead (the departed to them)."/12^{ab}

Transl. Bloomfield : 1897, p.60 with minor alterations

The world of immortality which is desired in these ceremonies should be conceived of as a complete life-time in this world of light. Many texts proclaim that hundred years constitute a complete life-time (14) The incantations are especially directed against premature death. One should not die before old age. The patient should stay in the world of light and behold the sun. The god Agni is requested in this context :

"Unite him, Agni with breath and sight, provide him

with a body and with strength! Thou hast a knowledge of immortality: let him not now depart; let him not now become a dweller in a house of clay."/AV. 5.30.14

Death is however accepted when it comes in old age.

There seems to have existed a close connection between the location of the realm of the dead and the practice of burial of the corpse. The dwelling in the house of clay seems to refer to the custom of the interment of the corpse in the earth where it abides in black darkness. Most Vedic texts, however, refer to the practice of cremation, but Oldenberg (1917, p.571 sq.) already has observed that this was certainly not a general custom. He gives an enumeration of the passages in which the dead are not cremated but buried or just left behind in the forest. A pre-Vedic 'survival' of the practice of burying the dead is also described by Caland (1896, p.163 sq.) in his detailed study on the ancient funeral ceremonies. Interment of the corpse will have therefore been without doubt an older practice among the Indo-Aryan tribes than cremation. With the introduction of cremation as the funeral practice for the higher classes, the burial custom soon became outdated, apart from some exceptions. (15) Notwithstanding this, conceptions relating to Yama and his subterranean realm, which had their origin in the burial custom, were preserved. In the RV. these old conceptions are found along with new ones. According to RV. 10.14 the departed should follow the ancient path of Yama which leads precipitously downwards like down-flowing water (pravat). This text suggests that the hereafter is located beneath the earth, but another stanza of the same hymn speaks about a home in the highest heaven where one will meet Yama and the Fathers as a result of sacrifices and meritorious acts. Conceptions concerning the hereafter of various origins have been mixed up in this hymn without much coherence.

Another close relation between the burial of the corpse and the subterranean location of the hereafter is found in RV. 10.18.10-13 :

"Creep away to this broad vast earth, the mother that is kind and gentle. She is a young girl, soft as wool to anyone who makes offerings; let her guard you from the lap of destruction (Nirrti)./10
Open up, earth; do not crush him. Be easy to enter and to burrow in. Earth, wrap him up as a mother wraps a son in the edge of her skirt./11
Let the earth as she opens up stay firm, for a thousand pillars must be set up. Let them be houses dripping with butter for him, and let them be a refuge for him here for all days./12
I shore up the earth all around you; let me not injure you as I lay down this clod of earth. Let the Fathers hold up this pillar for you; let Yama build a house for you here."/13

In this liturgical text the earth is invoked to be kind to the dead. She should guard as a good mother the buried corpse against Nirrti, the goddess of destruction, who is closely connected with the process of decomposition. This Nirrti represents, in my opinion, the earth in her destructive aspect (16) Her function would not be clear in this context, if the burial ceremony related only to the interment of the bones, because they already represented

the immortal parts after the process of decomposition and putrefication. Nevertheless, the text is clear in its statement that the departed, who is buried in the earth, will receive there a house built by Yama and the Fathers. With his descent into the grave the dead is given over to Yama and the Fathers who inhabit the gloomy subterranean areas along with other dangerous earth spirits.

Beside the existence of a fearsome hereafter of black darkness, the Vedic texts also proclaim the reality of a heavenly paradise. In R.V. 9.113.8-11 this heavenly place is described by a poet, who is under the hallucinogenic influence of soma :

"Where Vivasvat's son is king, where heaven is enclosed, where those young waters are - there make me immortal. 0 drop of Soma, flow for Indra./8
Where they move as they will, in the triple dome, in the third of heaven, where the worlds are made of light, there make me immortal. 0 drop of Soma, flow for Indra./9
Where there are desires and longings, at the sun's zenith, where the dead are fed and satisfied, there make me immortal .../10
Where there are joys and pleasures, gladness and delight, where the desires of desire are fulfilled there make me immortal.."/11

Yama, the son of Vivasvat, the king of the world of the dead, is here located in heaven. Also in other texts of the R.V. the idea recurs that Yama revels in heaven together with the gods and deceased ancestors. The home of the gods and the dwelling-place of Yama are identified with each other in R.V. 10.135,7:

"This is the dwelling-place of Yama, that is called the home of the gods."/

The journey of the departed of the priests. To the accompaniment of the funerary hymns of priests the deceased is said to be transported upon a chariot or a ship. These terms are often used as metaphors for sacrifice and oblation. (17) The application to the funerary ceremony of concepts relating to sacrifice has influenced ideas concerning the hereafter. Just like the burnt-offerings, the corpse is transported to the heavenly regions where Yama abides together with the gods.

The idea of offering the corpse as an oblation into the fire is mentioned in the hymn dedicated to the cremation fire, viz. R.V. 10.16.5. Agni, the god of the fire, is requested in his function of mediator between earth and heaven, to convey the deceased to the highest heaven.

"With your gentle form, 0 Knower of creatures, carry this man to the world of those who have done good deeds."/RV. 10.16.4^{cd}

The world of those who have done good deeds is specified in another hymn :

"Unite with the Fathers, with Yama, with the rewards of your sacrifices and good deeds, in the highest heaven. Leaving behind all imperfections, go back home again; merge in a glorious body."/RV. 10.14.8

The highest heaven is destined for those who have performed sacrifices and done good deeds. These good deeds are not merely those of the dead man, but also those which are done on his behalf in

the funeral ceremony. His corpse is offered as an oblation into the fire and cremated. The correlation between cremation, sacrifice and heaven as a place for the dead clearly points to priestly origins. Heaven is contrasted with the traditional representations of the hereafter. The subterranean realm of Yama and the Fathers becomes connected with impurity, for the flesh-eating Agni, who is polluted by the cremation of the corpse, is sent to the farthest dwelling-place.

"I send the flesh-eating Agni far away. Let him go to those whose king is Yama, carrying away all impurity." /RV 10.16.9^{ab}

The wish to expel the polluted fire to this farthest region presupposes that Yama and the Fathers, who are located there, were somehow regarded as impure and therefore dangerous. In this respect the priests resorted to the traditional conceptions of the population, but they also introduced a new concept of a hereafter in heaven for those dead persons who were cremated as a burnt-offering.

The task which is attributed to Agni according to RV. 10.16 is quite restricted. He should not destroy the corpse totally, but should only cook it. (18) When it is perfectly cooked, the departed should be sent to the Fathers in heaven. The skin of a cow is used as a shield to defend the corpse against the cremation of the bones. Only the putrefying mortal flesh should be carried away. As such, the flesh-eating Agni quickens the process of decomposition and cleans the bones. The bones, representing the immortal part of the departed (19), should be carefully preserved, for the dead is actually thought to be present in them. These bones are gathered and buried.

The conception that the bones of the departed should not be destroyed during the cremation ceremony makes it difficult to suggest the burnt-offering as an exact parallel, for this implies total destruction. This emotional meaning attached to the bones is also found in the old animal sacrifice. Conceptions relating to it may have influenced ideas concerning cremation. Though I cannot deal fully with the intricate problems, mention should be made of the similarities. In RV. 1.162 and 163 the sacrifice of a horse is described. It is slaughtered and carefully prepared as a sacrificial meal for the priests and the gods. The raw flesh is cooked and grilled and the bones are carefully preserved. They should not be damaged, but remain whole so that they can be arranged in accordance with their original pattern and given back to the divine owner of the horse, the god Tvastar, who fashions men and beasts. (20) To the horse the words are spoken

"You do not really die through this, nor are you harmed. You go to the gods on paths pleasant to go on." /RV 1.162.21 ab

The horse stays in the heavenly regions together with the gods.

"The swift runner has come to the highest dwelling-place, to his father and mother. May he go to the gods and be most welcome and then ask for the things that the worshipper wishes for." /RV 1.163.13

In these stanzas the hereafter is located in the highest heaven. The god Pusan, who functions,

among others, as a *psychopompos*, brings the horse to this heavenly place and receives a he-goat as his share of the sacrifice. In the cremation ceremony his function is taken over by Agni, who now instead by him is honoured with a he-goat. Pusan, however, is not forgotten, for he is mentioned in the funeral stanzas of R.V. 10.17.3-6 as the guide of the departed.

Just as in the animal sacrifice, the bones of the dead are treated carefully. They are not destroyed, but the bones are only cooked during the cremation. This treatment of the bones can only be explained by the popular tradition that they represented the immortal parts and as such were essential for a new body in the hereafter. In this context the question may arise as to how the blessed dead could live in the highest heaven when their bones were buried in the earth. The priests invented an answer which took cognizance of the deep-rooted popular conceptions concerning the bones. They developed a sacrificial procedure for furnishing the dead with a new heavenly body by offering balls of rice (*pinda*) for each limb into the fire, from which heavenly limbs would be created. Their solution shows how tenacious these traditional beliefs must have been, for otherwise this practice would have been incomprehensible, certainly if one considers the analogy between the cremation and the burnt-offering in which the material is destroyed.

With the introduction of the cremation fire into the funeral ceremony new conceptions concerning the hereafter were introduced. As a consequence of this, the position of Yama and the Fathers changed. The popular notion of a subterranean realm of the dead was supplemented by a heavenly paradise for special groups of departed. (21) The Vedic priests played an important role in this development. They saw a new market in the cremation line. As they were specialists in the sacrificial worship of the gods, they considered themselves specialists in the cremation ceremonies as well. Therefore they incorporated them in the repertoire of sacred activities with which they served their well-to-do 'clientele'. They devised a cremation ceremony in which the ancient funeral traditions were incorporated and in which everybody could find something of his 'old time religion'. To say this does not exclude the fact that they also made their own contribution to this ceremony. They introduced conceptions which had their origin in the sacrificial worship of the gods by means of the fire. The cremation ceremony came to be regarded as a sacrifice in which the dead body was transferred as a burnt-offering to the realm of heaven where both gods and Fathers, with Yama as their leader, enjoyed their 'life immortal'. (22) Notwithstanding this innovation, many traditional concepts remained unchanged. The roads on which the gods travelled were distinguished from the roads of the Fathers.

"Go away, death, by another path that is your own, different from the road of the gods." /RV 10.18.1^{ab}

The path of the Fathers leads to the realm of Yama and is therefore also called the path of Yama. (23) It is dangerous, connected with death and leads not to heaven, but to the subterranean realm of the dead. One of its characteristics is that it is connected with impurity. The deceased ancestors therefore received the offerings with the left hand in opposition to the gods who got

their sacrificial portion from the priests with the right hand. This clear distinction between both groups was also preserved in many other customs and did not sink into oblivion when certain groups of Fathers were admitted to the heavenly regions. They did not travel along the path of the Fathers; discovered by Yama, but along the road of the gods. Notwithstanding this new conception of the hereafter, the traditional images of a subterranean realm of the dead were retained as was the ambivalent attitude towards the Fathers.

As mentioned above, the funeral traditions collected in ancient Vedic texts are composed of fragments from various origins at the root of which are different conceptions concerning the dead and the hereafter. The priests supplemented the conception of a subterranean realm of the dead under the dominion of Yama by introducing the promise of heavenly afterlife for those who had done meritorious acts and performed sacrificial worship. In spite of these sometimes conflicting views there is however unanimity with respect to the question concerning the origin of death, for Yama is introduced as first among the mortals, who died and found the path to the hereafter. He is neither god nor man, as has rightly been observed by Dandekar (1979, p. 119 sqq.) and others before him, but he has clear connections with gods and human beings. The fact that his mythology plays an important role in the funeral ceremony indicates that it answers questions which are of vital importance for the participants. Why should people die? Since this question is closely linked with the origin of human life, the Yama mythology is especially centered upon these topics. To say this does not exclude the fact that for the mourners Yama represents in the first place the world of the dead. He bewilders the living by breaking into their existence and leading away one of their members to his realm in the hereafter. The king of the dead is also the convener of the living. He causes chaos and distress in their world and as such is an object of awe and fear.

The funeral ceremony is a liminal situation in which the living and the dead meet each other.⁽²⁵⁾ The living take leave of their relative and deliver him to Yama and the Fathers. The funeral stanzas praise the lord of the dead with the words.

'Him who has passed away along the mighty steep and has spied out the path for many mortals, Vivasvat's for many mortals, Vivasvat's son, convener of the peoples, Yama, the king, do thou honour with oblations./RV. 10.14.1.2.

Yama was the first for us to find the pathway. From us this pasture never can be taken, whereon have gone our former Fathers, along their several paths - they who were born here."/

The parallel passage in the AV. has slight variants which are instructive. It is proclaimed here that Yama died as first among the mortals.

"Him who has died first among the mortals, who went first to that realm, Vivasvat's son, convener of the people, Yama, the king, do thou honour with oblations."AV. 18.3.13.

Yama is the first who died and found the path to the realm of the hereafter and became king over that realm. The origin of death is in these stanzas

explicitly connected with Yama, for he was the first mortal being to die. This brings me to the question of why Yama had to die and with him all mortal beings. It seems to me that, in the context of the funeral ceremony, this is a valid question for the mourners to ask themselves. The stanzas used in the funeral liturgy do not give answers to this question, but in the broader context of the funeral traditions, as found in the RV. and the AV., clear indications are given. In particular RV 10.13.4 provides a valuable clue (26) Geldner (1951, III, p.141 sq.) has observed in a note with reference to this stanza that in ancient Vedic thinking progeny and death are as closely associated as immortality and godhead. Yama chose for progeny and consequently for death. The parallel passage in AV. 18.3.41 offers some variant readings which express this idea clearly. It runs:

"Did he (Yama) chose death for the gods? Why did he (Yama) not chose immortality for (his) progeny? Brhaspati, the seer, has extended the sacrifice. Yama has propagated his dear body."/

The occurrence of Brhaspati in both versions is rather incongruous. Since Yama is the subject in three of the four padas Ludwig proposed to read *vaivasvato* in pada c instead of *brhaspatih*. (26) The translation would be in that case: "The son of Vivasvat, the seer, has extended the sacrifice." This conjecture would fit very well with other traditions in which Yama is introduced as the first sacrificer. Yama's choice of sexuality and progeny constitutes an asymmetrical relationship between men and gods which is expressed by means of the sacrifice. If this is the original reading the compilers of this tradition would have substituted Brhaspati for Yama because this concept was more consistent with the ideas of the priests. (27) For, unlike the mortal Yama of popular tradition, Brhaspati embodied the divine prototype of the human priest. By introducing him, the compilers expressed the divine origin of sacrificial worship. In this respect the current versions of the stanza seem to be an expression of hieratical innovation. (28) However, even if one does not accept this conjecture, the implicit connection between procreation and death is valid, for Yama chose to procreate - stretch forth or propagate - his dear body and by so doing deprived himself of immortality.

The popular tradition of Yama and Yami fits very well in this reconstruction. The fact that they were brother and sister was not considered to be reprehensible because they were the only mortal beings who existed in the beginning, *in illo tempore*. When the popular traditions became incorporated in the hieratical tradition the Yama-Yami story could not bear the examination of priestly moralists. They modified the story in such a way that Yami, the first female being, tried to seduce her brother, but the priestly balad of RV.10.10 relates that he resisted her for the sake of morality (29) Also RV. 10.12.6 (cf. AV. 18.1.34) points to this old myth in which Yama and Yami would have committed 'incest' for the sake of procreation of mankind.

Yama had to die because he obviously chose for procreation and hence for death. The message of this mythology not only answers questions relating to the origin of death, but it also contains an implicit instruction. The myth of Yama as the progenitor

of the human race is a reminder of his choice for life, sexuality and procreation. In the funeral ritual the living should face the inevitability of death in the presence of Yama and the deceased ancestors, but they should also be aware of the values of life and give expression to them.

The origin of death is explained by Yama's choice, but no answer is given to questions regarding the origin of Yama as procreator of the human race. The first two stanzas of RV. 10.17.1-2 supply an answer in the form of a riddle (brahmodya). Like most brahmodyas they have not functioned as liturgical formulations but are adjuncts to the liturgy. According to Bloomfield (1892, p.184) they would have been pronounced at the end of the solemn ceremony and would have related to important theological issues. This riddle, which relates the marriage of Tvastar's daughter Saranyu with the mortal Vivasvat, mentions Yama's name. Saranyu is a divine origin because her father is the god Tvastar. From this marriage Yama and Yami are born and also the two Asvins. Hence Yama is frequently called by his patronymic vaivasvato, son of Vivasvat. The fact that Yama is the child of a goddess and a mortal being indicates that he is a mediating figure, or, in the words of Dandekar a 'god-man'. It throws special light upon his position and distinguishes him from the human race. This special position is expressed by the fact that he is never called a god or human being in the ancient Vedic texts, but always a *martya*, a mortal being. The main reason for this is that he could choose between immortality or sexuality. This freedom of choice places him in line with the gods and distinguishes him from mankind. He is, however, contrasted with the gods in that he opted for sexuality, progeny, and hence for death. It is this decision of Yama that bound his progeny to death and contains the instruction for procreation.

With Yama's choice the differentiation between the world of the gods and that of man became concrete. The primeval state, in which mortal and divine beings were not clearly distinguished and could marry, was disrupted and time began to run its course. The gods are characterized by their immortality and human beings by their sexuality progeny and death. By this decision of Yama an asymmetrical relation between the two parties was brought about. He instituted the tradition of sacrifice, became the first sacrificer, or to say it otherwise, the first to stretch the web of mankind and sacrifice; RV 7.33.9, 12.

As is mentioned before, Yama mythology mainly had its "Sitz im Leben" (its origin) in the funeral cult. This had long been a popular cult, deeply rooted in broad strata of the Aryan population. As such Yama mythology has always been a popular answering questions which were of vital importance in the context of the funeral ceremony. It is not therefore necessary to regard the conception of Yama as first among the mortals and progenitor of the human race as being secondary to that of his role as king of the realm of the dead, as Arbman (1928, II, p.226 sq.) claims. These two conceptions form an organic whole and are counterparts of each other. There can be no life, viz. sexuality and progeny, without death.

Yama mythology is not isolated and self-contained

but in all probability has formed part of a complex of popular conceptions originating in Indo-Iranian times, which have been blurred or modified in the course of time. In conclusion one instance may suffice as an indication. Tvastar is introduced as the father of Yama's mother Saranyu. In RV. 10.18.6, a stanza directed to the mourners, it is proclaimed :

"Climb on to old age, choosing a long life-span, and follow in regular succession, as many as you are. May Tvastar, who presides over good births be persuaded to give you a long life-span to live."

Tvastar, the old creator god who is connected with the fashioning of creatures and shapes and also with procreation, is introduced here because he is associated with values which are essential for life. (3) He is connected with the continuation of life. As I have shown elsewhere, he was the central figure in a popular family sacrifice for the realization of a multitude of cattle and progeny. In the later hieratical cult this ancient creator god was ousted and only some of his original characteristics were preserved. He lived on as a genius of fertility. In the dialogue of RV. 10.10 Yami appeals to Tvastar as the old creator god who is closely connected with the process of procreation, but Yama resists her as a representative of the hieratical ethic. These examples make clear that Yama and Tvastar are connected with each other in the folk mythology of the Indo-Aryan tribes. The outlines of this mythology are vaguely apparent in the fragments which have been preserved. Tvastar, who has shaped heaven and earth and all living beings, arranges as father of Saranyu a marriage for his daughter with the mortal Vivasvat. Yama, who is born from this marriage, chooses for sexual life and progeny and hence for death. With him human life on earth began, yet, as the first mortal to die and discover the subterranean realm of the hereafter, he also became king of the dead. While Tvastar was originally located in heaven and sometimes equated with Dyaus (31) Yama and the deceased ancestors initially were located in the netherworld.

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(Contd. from page no. 11)

The researchers are led to believe that many buildings in India hitherto assumed to be Islamic may turn out to be from periods preceding the Muslim invasions said to have begun early in the 16th century.

David King a New York University Scholar of the Near East who has studied the orientation of ancient Islamic mosques is quoted as observing that the mosque which is part of the Taj complex faces due west, whereas Mecca from Agra is several degrees south of west. "It is also oriented to the cardinal directions as would be typical of a Hindu temple in India", he adds.

King argues that the Muslims renowned world leaders in Mathematics and astronomy during the Middle Ages could hardly have blundered so egregiously in locating Mecca.

Also, researching ancient Arabic sources, King finds that writings justifying such erroneously located mosques mainly occur after the accepted date of their construction "which proves that they are not specifications for construction, but rationales after the fact".

King is puzzled that the Taj, purportedly a tomb, is a fortified complex with hundreds of rooms. It is more suggestive of a Hindu Palace built to accommodate a King's family and guests, he observes.

Dr. Van Den Bosch, a professor of religious iconography in Holland, who visited Agra has been "struck by the many examples of Hindu symbolism in the architecture of the Taj".

Recently here to attend the inauguration of the Institute for Oriental Study, he stressed the importance of determining the true origins of the Taj.

Times of India which did not publish the original news, was prompt enough to publish an anonymous experts report from Agra with a conclusive caption.

Carbon dating evidence on Taj Wrong: experts

ARCHAEOLOGICAL experts here generally disagree with the theory put forward by some researchers casting doubts over the probable period of construction of Taj Mahal as recorded in history. They are, in fact, inclined to dismiss it as no more than conjecture.

The theory, according to Dr. Vijay Badekar, founder of the Institute of Oriental Study at Thane (Maharashtra), is based on radiocarbon tests on a wooden piece taken out of a door on the northern facade of the mausoleum. The tests were conducted by a team of researchers at Brooklyn College (U.S.).

Local experts point out that enough evidence has been provided by Mughal chroniclers and foreign travellers which disprove the theory that the monument is much older than it is generally believed to be. They also refer in this context to inscriptions like those on the graves of Mumtaz Mahal and Shahjahan, as also quotations from the Koran inscribed on the Mausoleum's walls giving definite dates.

A European traveller, Tavernier, who visited India in 1629 and stayed for nearly a quarter century, had claimed in his memoirs that he was an eye-witness to the beginning of work on the Taj.

An archaeological expert, who does not wish to be identified, says the radiocarbon dating tests, on which the theory that the Taj was built in 1359 has been based, are not reliable as evidence. Material used for such tests should be completely free from contamination, particularly by organic particulate matter.

He points out that the radiocarbon dating technique can yield "unbelievable" results if the basic material subjected to tests is contaminated. Recently, when some material from the tombs of the pharaohs was subjected to such tests, grandfathers got correlated with grand-sons and vice-versa. Radiocarbon testing, he contends, leaves an error factor of plus or minus 200 years.

It had been claimed that the chip of wood subjected to the tests had been obtained from a doorway on the northern facade of the Taj. However, it is a fact, says the expert, that none of the existing gates of the monument is "original". Most of the present gates were put up during the period of Lord Curzon on the recommendations of a 10 member committee. The original doors and gates had by then either decayed or had been removed.

The first looting apparently took place around 1718 when the Sayyed brothers plundered the Taj. History says they took away pearls covering the royal tombstones and also the cenotaph's doors made of a special type of jasper.

of the erstwhile Bharatpur state, raided Agra in 1762. Besides demolishing certain Mughal buildings he carried away silver doors of the Taj which had been embedded with 1,100 silver coins as nail-heads. Other doors and gates were either damaged or destroyed by the Maharaja's troops.

As for a New York scholar's reported observation that the mosque attached to the Taj faces due west whereas Mecca is several degrees south-west of Agra, the archaeological expert points out that similar directional discrepancies can be found in almost every mosque in the city, whether built before the Taj or afterwards. The tomb overlooking the Taj across the Yamuna, for instance, has the same cardinal error.

The earliest mosque in Agra was known as Sabun Katra Masjid, where a noted historian had found Buddhist features during excavations. This mosque was presumably built after demolishing a Buddhist monastery during Sikander Lodhi's time. This too has the same directional orientation as the mosque in the Taj complex.

There is evidence to show that whenever invaders pillaged, Hindu and Buddhist structures, they used selected material retrieved from the demolished buildings for constructing mosques.

Recent discoveries clearly show how under Shahjahan's orders Rajput rulers had arranged for transportation of marble from Makrana to Agra for building the monument.

In one of his letters, Shahjahan is how under Shahjahan's orders Rajput Singh of Amber on learning that a large number of bullock carts carrying marble had been diverted to some other place.

Dr. Bedekar wrote a letter to the editor of Times of India which was edited and printed on 28th February 1984 in Times of India. We are printing here the original letter.

THE EDITOR,
The Times of India,

In reference to your news item about Taj which appeared in your paper dated 14th Feb. may I say that you have done gross injustice to your readers. My Press Note (P.T.I.) on Carbon dating of Taj revealing pre-Shahjahan existence of the Taj building was printed in almost all leading English newspapers of the City except the "Times of India". But the opinion of an anonymous expert with a misleading Caption promptly appeared in your paper only. An opinion of an expert who is anonymous lacks reliability and becomes valueless.

Carbon dating is a very important investigation used in archaeology for dating various ancient monuments. It is an objective Test free from all influences of individual opinions, conclusions and interpretations. It is surprising that the expert quoted has realised the drawbacks when the results do not favour his views. To make the test more unreliable he stretches the error from 89 years to 200 years, without realising that he is making all dates unreliable given by his own archeology Department based on Carbon dating in the past. Truth though unpalatable should be accepted without

Be that as it may, the point that the mosque in Taj does not face towards Mecca is valid. A monument known for its architectural precision cannot have such a basic flaw. Your expert has no answer to it. Further more his statement that almost all mosques in and around Agra have this cardinal error is a tacit approval of the theory that all these mosques are the sites of original Hindu Temples. David King New York in his paper has not only pointed out this basic flaw of the orientation of the mosque at Taj, but also has pointed out that they oriented to the cardinal directions of a typical Hindu Temple in India.

Lord Curzon (1899-1905) if has changed the gates, the carbon dating should give recent dates and not the early dates. So if the dates do not go in favour of our view, should we revise our view or dismiss the carbon dating?

I have tried to put forth truth. They say truth unlike fiction bites and not barks.

Yours faithfully,
for INSTITUTE FOR ORIENTAL STUDY, THANE.

(Dr. Vijay Bedekar)

London Calling

Part 3

Period 1876 to 1885

1876

"History of Indian and Eastern Architecture" by James Fergusson was published as a separate book. There is a 49 page introduction dealing with History of India. As history of architecture goes hand in hand with the history of the people, blunders in one, result in blunders in the other.

The Book III Chapter IV we find "Dravidian Temples" Fergusson says - "... A similar state of affairs prevailed apparently in Egypt in the time of the Pharaohs, but with very different results. The Egyptians had great and lofty ideas, and a hankering after immortality, the impressed itself on all their works. The South Indians had not such aspirations; they had no history to which they could look back with pride, and their religion was an impure and degrading fetishism. It is impossible that anything very grand or imposing should come out of such a state of things. ... To cut a chain of fifty links out of a block of granite and suspend it between two pillars, was with them a triumph of art... All that millions of hands working through centuries could do, has been done, but with hardly any higher motive than to employ labour and to conquer difficulties, so as to astonish by the amount of the first, and the cleverness with which the second was overcome - and astonished we are; but without some higher motive true architecture cannot exist. The Dravidians had not even the constructive difficulties to overcome which enabled the mediaval architects to produce such noble fabrics as our cathedrals.

The aim of architects in the Middle Ages was to design halls which should at the same time be vast, but stable, and suited for the accommodation of great multitudes to witness a lofty ritual. In their struggle to accomplish this, they developed intellectual powers which impress us still through their works. No such lofty aims exercised the intellectual faculties of the Hindus. His altar and the statue of his god were placed in a dark cubical cell wholly without ornament and the porch that preceded that, was not necessarily either lofty or spacious It is in vain, however we look among them for any manifestation of those lofty aims and noble results which constitute the merit and the greatness of true architectural art, and which generally characterise the best works in the true styles of the western world..."

In Book V Jaina Architecture is described. In Chapter IV we find -

Converted Temples

... Be this, as it may, for our present purposes the one fact that is certain is, that none of them are now Jaina temples. All are Muhammedan mosques, it will, therefore, be more logical, as well as more convenient, to group them with the latter, rather than with the former class of buildings. (What a logic! By the same token, Salazar used to claim Angola, Mozambique and Goa, as parts of Portugal). Were it not for this, the Arhai-din ka jhompra at Ajmir - so called, might be and has been described as a Jaina temple ... so might be a great part of the mosque at the Qutb, near Delhi ... but the light columnar style of the Jains not only supplied materials more easily adapted to their purposes, but furnished hints, of which the Muslim architects were not slow to avail themselves of. The architecture of Ahmedabad for instance (AD 1410 to 1572) is derived far more directly from the Jaina, than from any style familiar to their co-religionists in any other part of the world. The same may be said, of that of Jaunpur (U.P.) ... (Fergusson is contradicting himself in Book VII Chapter III, he clearly confesses that there were no Muslim Architects.)

In Book VII we find ...

Indian Saracenic Architecture Chapter I

... The architecture of the nations under the Arab Khalifat, has been elsewhere described, and is of very minor importance. The ruling people were a Semitic race, and had no great taste for architectural magnificence; and unless where they happened to govern a people of another stock, they have left few trails of their art ...

... The Saracenic architects showed in India the same pliancy in adopting the styles of the various people among whom they had settled, which characterised their practice in the countries just mentioned. (In other words there is no such thing as Saracenic Architecture. They always converted other peoples' buildings into Mosques and Tombs and tried to pass them on as their own). It thus happens that in India we have at least 12 or 15 different styles of Muhammedan architecture; and in this attempt, were made to exhaust all the examples it would be necessary to enumerate even a greater

number (Such variety is tolerated only in Hindustan).

Chapter III

Pathan Style

... So as soon as they felt themselves sure of their conquests, they set to work to erect two great mosques in their two principal capitals of Ajmer and Delhi of such magnificence as should redound to the glory of their religion, and mark their triumph over the idolaters. A nation of soldiers equipped for conquests and that only, they had of course brought with them, neither artists nor architects, but like other nations of Turanian origin, they had strong architectural instincts, and having a style of their own (Fergusson gives not a single example of the work of Pathan architects) they could hardly go wrong in any architectural project, they might attempt ...

... In the first place they found in the colonnaded courts of the Jaina temples nearly all that was wanted for a ready made mosque. All that was required was the removal of the temple in its centre, and the erection of a new wall on the west side, adorned with neiches - mihrars - to point out to the faithful the direction in which Mecca lay. (And thus Fergusson confesses that Pathon style simply means Jaina temples forcibly occupied and slightly modified by Pathans through forced Hindu labour).

AJMIR - Arhai-din ka Jhompna

... This solecism, if it may be so called, evidence arose from the architects being Hindus ...

Chapter IV JAUNPUR

... Some authors have been led to suppose that the pillared parts belonged to ancient Jaina or Buddhist monuments, which had been appropriated by the Muhammedans and converted to their purpose. The truth of the matter appears to be, that, the greater part of the Muhammadan population in the province, at the time the mosques were built, were Hindus converted to that religion and who still clung to their native forms when these did not clash with their new faith ... (Fergusson is very naive - when Hindus were being forcibly converted into Mohammedan faith, why would not the rulers also, forcibly convert Hindu Temples into Mosques, using the converted labour) ... Sita ki Rasoi. It seems to be a Jaina temple, rearranged as a Mosque in the manner described at pp. 68, 69 ... According to an inscription over its principal gateway, its conversion was effected by Ibrahim Shah of Jaunpur A.D. 1406.

(This then is all that is called Muslim Architecture. It is nothing but some rearrangement and forcible conversion of Hindu temples. But Fergusson would, simply go round and round, and never accept the truth. The dates on Mosques and Tombs are dates of forcible occupation, conversion and misuse, and NOT of COMPLETION OF CONSTRUCTION.

Chapter V - GUJARAT

... In Ahmedabad itself, however, the Hindu influence continued to be felt throughout. Even the mosques are Hindu, or rather Jaina, in every detail; only

here and there an arch is inserted not because it was wanted constructively, but because it was a symbol of the faith (Now Fergusson becomes a fanatic. In the 1855 book - "Handbook of Architecture" page 420 he says ... "a wall facing Mecca is all that is required, even a roof is not required) while in their tombs and palaces even this is generally wanting.

If the plan (of Jami Masjid) is compared with that of the temple at Rampur which was being erected about the same time under Kumbha Rana within 160 miles of Ahmedabad, it will afford a fair means of comparison between the Jaina and Muhammadan arrangements of that day. The form of the pillars and the details, generally and practically are the same in both buildings (but Fergusson would not say that the Mosque is an old temple)... There are three or four mosques at Ahmedabad, built on the same pattern as that, last described - (i.e. Rani Rupawanti's Mosque, Mirzapur), but as the style progressed it became more and more Indian (??).

... Besides these larger mosques, there are several smaller ones of great beauty, of which two ... those of Muhafiz Khan and the Rani Sipri - are pre-erninent ... As will be seen from the woodcut, as well as from those of the Jami and Queen's Mosques, the lower part of the minarets is of pure Hindu architecture ... Every form and every detail, may be found at Chandravati or Abu, except in one particular on the sides of all Hindu temples, are niches containing images. This the Moslim could not tolerate, so he filled them with tracery. (For an account of British planting crescent on these mosques to give a Semblance of Islamic usage see events of 1910) ... Indeed that mosque (Rani Sipari) is the most exquisite gem at Ahmedabad, both in plan and detail. It is without arches, and every part is such, as only a Hindu queen could order, and only Hindu artists could carve. (But Fergusson would not say that this is not a mosque but a temple, usurped by the Muslims). ... A third mosque erected in 1361 almost entirely of materials from Hindu temples, in known as "Tanka Masjid".

Chapter VI - Malwa

... Though an old venerated city of the Hindus, Dhar, contains no evidence of its former greatness, except two mosques erected wholly of Hindu remains. The principal of these - the Jami Masjid ... its roof is supported by 64 pillars of Hindu architecture ... and the 3 domes that adorn it, are also of purely Hindu form... Internally nothing is visible but Hindu pillars, and, except for their disposition and the prayer-niches that adorn the western wall, it might be taken for a Hindu building.

In this instance, however, there seems no doubt that there is nothing in site. The pillars have been brought from deserted temples in town, and arranged here by the Muhammadans as we now find them. (Fergusson does not explain why the Muslims should behave in this extraordinary fashion, instead of just the temples as mosques).

... The other mosque is similar to this one and is called the Lat Masjid built from an iron pillar which lay half buried in front of its gateway ... My impression is, that it was used for some useful, constructive purpose, like those which supported

the false roof in the sun temple at Konark ... it is another curious proof of the employment of large masses of iron by the Hindus at a time when they were supposed to be incapable of any such mechanical exertion. Its date is probably that of the pillars of the mosques where it is found, and from their style they probably belong to the 10th or 11th century. (In other words Lat Masjid is a 10th or 11th century temple vandalised and misused by Muslims).

... On one side of the (Jami Masjid) mosque is a splendid Dharmasala, supported by three ranges of pillars, 28 in each row. These are of a pattern, purely Hindus in style.

Chapter VII

Bengal

Capital Gaur

... Having nothing but brick, it was almost of necessity that they employed arches everywhere and in every building that had any pretensions to permanency.

... the architecture of Gaur, the Muhammadan capital of Bengal deserves attention for its extent, and the immense variety of detail which it displays

... The city of Gaur was the famous capital of the Hindus long before it was taken possession of by the Muhammadans. The Sena and Pala dynasties of Bengal seem to have resided here, and no doubt adorned it with temples and edifies, worthy of their fame and wealth ... Many fragments of Hindu art in this material, are found among the ruins ... Its interest however principally lies in the influence it had on the Muhammadan style that succeeded it. (Here, Fergusson's fanatical assertion that Muslims destroyed Hindu temples, reused the stones and erected Mosques and Tombs from them, as if they were building Hindu temples, falls to pieces. There are no stones in Bengal. And Bengal was ruled by Pathans, who had no architects. Moreover, construction in bricks meant that Hindus did build arches and vaults. And if these forms were known and practised in Bengal why would they not be used elsewhere in India?)

... The general character of the style will be seen in the example from a mosque called the Qudam-i-Rasul. (This word means impression of Prophet Muhammad's foot. As there are no footprints of the Prophet in Mecca and Medina, those in this mosque must belong to some Hindu deity. The mosque is therefore a Temple which was captured and misused. Fergusson is making a fool of himself when he says that it contained foot of a prophet)...

... From inscriptions upon it, it appears that the Adinath Masjid was erected by Sikandar Shah, one of the most illustrious of his rare (AD 1358-1389). (Note - Muslims have forcibly occupied and misused so many temples that they have not even bothered to change their names. Even a school boy would know that Adinath masjid means the shiva temple of Adinath misused as a Mosque).

Chapter IX

Bijapur (Karnataka)

... For the first 50 to 60 years after the Public Session, Gurukul Kangri Collection, Haridwar

the struggle for existence was too severe, to admit the Adil Shahi's devoting much attention to architecture. The real building epoch of the city commences with Ali A.D. 1557; and all the important buildings are crowded into the 100 years which elapsed between his accession, and the wars with Aurangzeb which ended in the final destruction of the dynasty (see events of 1634) ...

... It is not easy now to determine how far this originality arose from the European (Turkish) descent of the Adil Shahi's and their avowed hatred of everything, that belonged to the Hindus, or whether it arose from any local circumstances, the value of which we can hardly appreciate. The foreign origin of the Adil Shahi dynasty and their partially for the Shah from of Islam prevailing in Persia. rather than the Sunnis, together with their ready employment of Persian officers, may probably have influenced their architecture, and led to that largeness and grandeur which characterised the Bijapur style. (Fergusson forgets one thing that Persians flocked to India as adventurers and not as artists or architects).

... Karimu-d-Din about 1316 had built a mosque in the fort at Bijapur, constructed out of Hindu remains ... Another mosque, known as Khwaja Jahan's dating from about the 2nd of the 15th century, resembles a Hindu temple ... But as soon as a new dynasty had leisure to think really about these matters, they abandoned entirely, all tendency to copy Hindu forms or Hindu details, but set to work to carry out a pointed arches or domical style of their own, and did it with singular success.

Fergusson then describes various tombs and mosques but fails to mention certain important details -

The Mausoleum of Muhammad Adil Shah (1626-1656) is called Gol Gumbaz ... In front is a great gateway 94 ft, by 88 ft. with a Nakkhar Khana (Drum House). Would you expect a drum house next to a tomb? There is also a cenotaph and a real grave chamber - why ?

Fergusson does say that Anar-i-Mubarak has been converted by the Muhammadans into a relic shrine to contain some hairs of the Prophet's beard. How? As such shrines do not exist outside India, is it quite logical to conclude that this shrine belonged to some Hindu set? Moreover, where would they obtain hairs from the Prophet's beard, 800 years after his death?

Later a Fergusson says ... one of the most remarkable edifices is a little gateway, known as the Mihtari Mahall. It is in a mixed Hindu and Muhammadan style ... It formed the entrance to a mosque.

In Book VII Chapter X we find chapter on "Mughal Architecture". Fergusson says - Babur was buried near Kabul ... and no building known to be his tomb has yet been identified in India. Yet that he did build is certain? (Why? because Babur says so in his memoirs? ... Babur defeated Ibrahim Lodi in April 1526, Rana Singh in March 1527 captured Gwalior and Chanderi in 1528; Bihar in 1529 and died in December 1530. When did he have time to build? Were there no buildings in India, which his enemies used? or did they live in open air? Did Babur come to India for building or was he

lured by the fabulous riches? Fergusson did not like such questions) ... There are traditions of a mosque he is said to have built on the banks of Jamna, opposite to the Taj Mahal where it stands. (Fergusson fails to state that all the Tombs and Mosques are said to be, supposed to be or believed to be built by Muslim rulers. The ruler themselves do not claim to have built anything!)...

... It is probable that considerable light will be thrown upon the origin of the style, which the Mughals introduced into India, from an examination of the buildings erected at Samarkand by Taimur a hundred years before Babar's time (AD 1393-1404)... Though a frightful savage in most respects Taimur was possessed of a true Turki love for noble architecture; and though he generally massacred the inhabitants of any town that resisted him, he always spared the architects and artists, and sent them to work on the embellishment of his capitals, (Thus Fergusson has Pathan Architecture without Pathan Architects, Mughal Architecture without Mughal architects. How wonderful) Samarkand was consequently filled with splendid edifices The bulbous dome appears every where, and was not known at that time in India (i.e. not known to Fergusson. And since there were no Mughal Architects bulbous dome was designed by Hindu Architects who were forcibly converted to Islam and transported to Samarkand)

AKBAR 1556 - 1605 A.D.

..... There is no trace of Hinduism in the works of Jahangir or Shah Jahan (Fergusson does seem to have lost his senses. In H.G. Keene's book "The Turks in India", 1879 page 106, we find a footnote In Jahangir's reign, architecture became still more Hindu than even under Akbar. The finest specimens are described in Fergusson "Indian Architecture"-

1. The Tomb of Akbar at Sikandara
2. The Temple of Govind Debi at Brindaban near Muttra
3. The Tomb of Itmad-ud-Daula at Agra
4. Jahangir's Tomb at Lahore

..... The one Probably of his earliest works was, the mausolium, which he erected over the remains of his father Humayun at Delhi (Fergusson is not sure ?). Though it certainly was finished by Akbar reign but there seems to be no mention of anyone building Humayun's tomb. British thinking is best illustrated by Thomas Twining --

"... After traversing ruined without a single inhabitant for a mile, I saw a large Mausolium at a short distance on our right... It was in vain, to look about for some one to gratify my curiosity. The once most popular and splendid city of the East now afforded no human being to inform me what king or prince had received this costly sculpture ... The name of Humaion in Persian letters of black marble, which chance or respect had preserved untouched, made in probable that this was the tomb of that excellent monarch ... The monument I beheld was doubtless an early act of the filial piety of the young Akbar, and was probably therefore erected or begun soon after the year 1556 when the prince only in his 15th year came to throne..." "Travels in India a Hundred years ago" pg. 219/220

see events of 1794.

Twining was accompanied by 30 native people, but they could not say that it was Humayun's tomb. But seeing the words Humayun, Twining automatically assumed that it must be his tomb and it must have been built by his son Akbar. All this when a Mughal King still ruled in Delhi! It is astonishing that other travellers, prior to Twining, have sworn that they did NOT see the name of Humayun on the tomb).

... One of the most remarkable and characteristic of Akbar's buildings is, the old or Red Palace in the Agra Fort ... Every feature around this court is indeed of pure Hindu architecture... Perhaps however the most characteristic of Akbar's building is the tomb he commenced to erect for himself at Sikandara ... and of a design borrowed, as I believe, from a Hindu or more correctly Buddhist model. It was completed in 1613 and is said to have 20 years in building. (all imaginary details).

... Turning back for instance to Woodcuts, Nos.89 and 193 representing the great rath at Mamallapuram, it will be seen that the number and proportion of the storeys is the same. The pavilions that adorn the upper storeys of Akbar's tomb appear distinct reminiscences of the cells that stand on the edge of each platform of the rock-cut example. If the tomb has been crowned by a domical chamber over the tombstone, the likeness would have been so great that no one could mistake it, and my conclusion is that such a chamber was a part of the original design.

(In other words that chamber was taken down for some valuable ornaments and Akbar's tomb was enforced on the building, Ditch. East India Company records confirm this. See "The Empire of the Great Mogol" by De Laet Joannes, translated by J.S. Hoyland, 1928 pages 170, 171, 172).

Taje Mehal

Once again the cross section through the central edifice of Taje Mehal is reproduced on page 597 but without any explanation. In the footnote Fergusson tells us. "For plan of this gardens and Taje and all surrounding buildings - see Col. Hodgson's article in the Journal of the royal Asiatic Society Volume VII (of 1843)

In Book VIII we find "Further India"

Chapter I Burma

Square Temples - The Sketch (woodcut no. 449) shows that the bricks of the Burmese arches, which measure generally about 12 inch by 8 inch and 3 inch thick .. This was the system employed in the vaulted passages leading to tombs in Egypt dating from 3500 B.C., in the drains of Assyrian palaces, at a later date by the Sassanians at Serbistan, Firurabad and Ctesiphon in Persia, and is said to be found in Chinese Turkistan ...

... It is however, remarkable, considering the close connection between India and Burma, so far as architectural style is concerned, to find the arch and vault employed systematically throughout the latter country, in buildings many of which are said to have been built by Indian workmen (though this term may have been generally employed to signify

a foreign origin). Note - Fergusson is bent on insisting that Hindus did not build arches and vaults.

PROME

... On the whole, however, I am inclined to believe, improbable as it may at first appear, that their real synonyms are to be found in Babylonia, not in India ...

... It may be asked, How is it possible that a Babylonian form should reach Burma without leaving traces of its passages through India? It is hardly a sufficient answer to say it must have come via Tibet and Central Asia, because, in the present state of our knowledge, we do not know of such a route being used. It is a more probable explanation to say that such monuments may have existed in the great Gangetic cities, but, like the Burmese examples, in brick and plaster, and have perished, as they would be sure to do in that climate and where hostile races succeeded the Buddhists. (In other words Hindus did build arches and vaults, but their work have already been destroyed, forcibly occupied and misused as Mosques and Tombs by The Muslims).

- Syed Ahmed Khan retires after 37 years of government service
- Tilak graduate from Bombay University.
- Sir John Marshall, poet Iqbal and Jinnah were born.

1877 A.D.

Elliot and Dowson's "History of India told by its own historians" volume VII dealing with the reign of Shahjahan, was published. Prof Dowson refers to Badshahnama Vol.I p. 384 and tells us that it gives the date of death of Mumtaz as 17th Zi-it-gada 1040 A.H. He then refers to page 395 and then suddenly jumps to page 404. Pages 402/403 of Badshahnama state that Raja Mansingh's palace, at that time in the possession of Raja Jaisingh was grabbed for burial of Mumtaz-ul-Zamam. We cannot believe that Prof. Dowson just forgot about these two pages - moreover he does not mention Taj Mahal at all. If he found no references to Taj Mahal in any contemporary Muslim chronicle, why does he not say so? Why should he hide the facts?

1877

1st January - Queen Victoria proclaimed "Empress of India". Syed Ahmedkhan is awarded "Grand Cross of the Star of India" on the same day.

8th January - Viceroy Lord Lytton lays foundation stone of Anglo - Oriental College the forerunner of Aligarh Muslim University. He visits Agra.

- Central Mohammedan Association was started.

1878

"Order of Indian Empire" started

- Syed Ahmed Khan was invited to Legislative Council by The Viceroy Lord Lytton. (reappointed by Lord Rippon in 1880. He thus served on the Council from 1878-1882).

1879

"Turks of India" by H.G. Keene was published. He tells us - p.119. Manucci came to Agra in 1656/7.

about 1649. The Taj Mahal of Agra has just finished (This is wrong. Manucci came to India in 1656/7).

p.128 ... Manrique describe banquet given by Asaf Khan to the emperor"... At this, when the time came, accompanied by a great train of beautiful and gallant ladies, who came in front very richly dressed ... Behind this slightly feminine society came the emperor between his mother-in-law and his daughter ... (Manrique saw ladies from Mughal's Royal harem? anyone saying this and anyone believing him must be mad! ... emperor laying his hand upon his mother-in-law bidding her to rise ... First entered four lovely girls related to Asaf Khan and daughters of great lords ... (and yet Keene wants us to believe on the basis of Manrique's testimony that the Architect of Taj Mahal was Veronco! There is a photograph of Begum of Bhopal and Edward VIII, Prince of Wales, taken in 1920/21. The Begum is in purdah see photo 96 on page 77 of Edward the uncrowned King by C. Hibbert 1972).

p.137... (1) Tombs and Palaces - First in order of celebrity is the famous Taj Mahal or Mausoleum of the empress Alya Begum who died in the end of A.D. 1629 at Burhonpur in the Deccan.

Like our Edward I Shahjahan carried the body of his consort to the metropolis, where it lay in a spot, still marked out in a corner of the garde, until the completion of the sculpture (How many lies in one sentence! The lady died in 1631, not in 1629. Shahjahan did not accompany her coffin from Burhampur to Agra. There is no basis for the spot marked in the corner of the garden),

- J.A. Dubois's "The People of India" was published.

1880 -

Tilak starts "New English School" in Pune.

1881 -

T.W. Beale's "The Oriental Biographical Dictionary" was edited by H.G. Keene's "The Imperial Gazetteer of India" by Sir, W.W. Hunter was published in 9 volumes (expanded to 14 volumes in 1885-87. Taj Mahal on p.74 of Vol.I).

1881 -

James Burgess - Archaeological Surveyor of Western India.

1882 -

'A Brief History of the Indian People' by Sir. W.W. Hunter was published (later editions 1884/90/95 and 1903)

1883 -

Veer Savarkar was born

- Murray's Handbook of Bengal was published. On pages 283 to 286 we find "... The Taj Mahal .. It may be premised that this Mausoleum was commenced in A.D. 1040 or A.D. 1630 by the Emperor Shah Jahan as a tomb for his favourite queen Arjmand Banu entitled Mumtaz Mahal ... She married Shah Jahan in 1615 A.D., had by him 7 children and died in childbed of the 8th in 1629 at Burhampur. Her body was brought to Agra and laid in the garden, where the Taj stands, until the Mausoleum was built. The Taj cost according to some accounts Rs. 1,54,65,186 and according to other accounts

Rs. 3,17,48,026. It took upwards of 17 years of build, and much of the materials and labour remained unpaid. According to Shah Jahan's own memoirs, the masons received only 30 lakhs. There were originally silver doors at the entrance, but these were taken away and melted by Suraj Mall and his Jats. It is uncertain who was the principal architect ...

The following measurements were furnished by the engineer employed in repairing the Taj before the Prince of Wales's visit ... The dome is brick veneered with marble ... (There is reference to Hodgson's paper of 1843).

Fergusson says "In the apartment above, where the show tombs are, the light is admitted only through double screens of white marble ... when used as a Barah Dari or pleasure palace, it must always have been the coolest and the loveliest of garden retreats".

1884 -

Sir Alfred Lyall, Lt. Governor of N.W. Provinces entertains Duke and Duches of Connaught, at Agra (February) "Indian Archeology" by J. Fergusson was published - on page 32-33 and 76-78 he evaluates Cunningham's work. He says" ... The architectural drawings in his (Cunningham's) reports were ludicrously inadequate; in fact he was not capable of making architectural sections or elevations of buildings. The attempts at architectural drawings that were made by Beglar were more like the production of a half-educated schoolboy, than anything that would be thought worthy of publication by a fully grown man. (Regular and Carlleyle were Cunningham's assistants) ... The truth of the matter seems to be that General Cunningham chooses his assistants not because of their fitness for the work they have to perform, but rather because of their incompetence, in order that they may not forestall the credit he thinks may accrue to him ... He seems to be afraid that some one should appropriate to himself a share of what he thinks belongs to him and him only ... During the 14 years he has been employed on the survey, he has contributed almost literally nothing to our knowledge of archaeology or architectural geography..."

1885 -

The voyage of J.H. Linschoten to the East Indies (Vol.I) was edited by A.C. Burner and published by Hakluyt Society.

- The Archaeological Survey of India was reorganised. The surveyors were now forbidden by Govt. order to indulge in arguments and speculations based on the spelling of names and similar considerations as to the identity of persons, places, tribes etc. (Resolution No.2-87-103 dated 6th June 1885 - Governor General in-Council. Quoted in the proceedings of the sub committee. Public Service Commission 1887 p.29 Ref. - Sir Alexander Cunningham and Indian Archaeology by Abu Imam, 1966 page 207). In other words, if the big chief says 'A Hindu temple was destroyed and a grand mosque built on the same site, using the same materials and following the same Hindu construction as before, the surveyors must say 'yes sir'; They must not ask "why should Muslims do such a stupid thing and not just throw away the idol and use the temple as a Mosque?"

- Cunningham retires. J. Burgess takes over as Director-General of ASI (Archeological Survey of India).

1885 -

"Indian Architecture of Today" by F.S. Growse of the I.C.S. was published. He complains very bitterly that the British are systematically destroying Indian Architecture. In the preface he says ... A circular has lately been issued which peremptorily forbids their (i.e. Indian Ministries) employment under Government. Under this department inform all posts of even Rs. 50 a month in the gift of any District Board must be reserved for the holders of a certificate from the Rurki College of Engineers, where no orientation has been tolerated ... Any native of ordinary ability can learn English and in due course obtain an Engineering certificate; having done so, he is at once qualified for an appointment of Rs. 250/- a month, in which he will be freely entrusted with the design and execution of local works, though he may know nothing of architecture beyond the hideous "standard plans" provided by the Public Works Department..."

While dealing with the History of Architecture Growse blindly follows Fergusson. He says -

p.52 ... Beyond the buildings themselves, there is no record in existence of the new rules of proportion, and the foreign canons of taste, which were the necessary sequence of the Muhammadan invasion and the introduction of the arch ... A Muhammadan Court, at once bigoted and magnificent, was ambitious to embellish its capital and display its devotion, but was unable to carry out its ideas, except by the exclusive employment of Hindu craftsmen of alien religion and opposite sympathies (so how did the Muslims introduce the Arch? Growse admits that there were no Muslim Architects)

p. 53 ... In three and a half centuries that had elapsed since the death of the last Hindu Sovereign of Delhi; Sarocenic art had become thoroughly naturalised (No one is prepared to show the various stages of naturalisation and its fusion with the older indigenous style, was the inevitable outcome of the closer and more equal intercourse, between the two races ... In Mathura and Brindaban tempels were constructed on the same ground plan, and exhibited the same massive proportions as the older examples that still exists at Gwalior. But the area of the interior was freed from its forest of pillars - no longer required as supports, when a vault was substituted for a roofing of stone slabs ... What full buildings there are in Mathura of the 16th century, are of strongly Hindu type, though built for Muhammadan users (wonders never cease!) but even here the modification has been rapid and continuous and the whole series of temples erected since 1803, the first year of British government and of settled peace, have domes and cupolas and arches, on the same constructional principles and with the same style of panel and moulding and surface carving as in a mosque (Growse seems to have lose sense of time. Aurangzeb died in 1707. Thus Hindus building arches and domes has nothing to do with Muslim rule. British never claimed to have introduced the arch.)

Later on however, Growse does show some intelligence and takes Fergusson to task. He says "...

To speak of Jain architecture, as is generally done, is altogether erroneous. What is so called is simply the style of national architecture that prevailed throughout the country and was used indiscriminately by both classes alike, at the time when the Jains happened to be most flourishing. Thus the larger temples in the Gwlior Fort is quoted by Mr. Fergusson as a specimen of Jain architecture and is said to be dedicated to Padmanath, the sixth Tirthankar. A very slight amount of research has proved it to be dedicated to the Brahmanical Divinity Vishnu under his title of Padma-pani; whence the mistake (pp 53/54).

In the footnote on page 54 Growse says - This eminent art critic (i.e. Fergusson) boasts of having spent 10 years in India, but he does not seem to have taken the trouble to learn a single Indian language, ancient or modern. Yet a smattering of Philosophy would have been of considerable service to him in his archeological researches. Such a solesism as the above would then have been impossible, as also his misconception with regard to the title of the great Marttand temple in Kashmir:

- Balfour's "Cyclopaedia of India" (3rd edition) boldly asserts that Austin de Bordeause was an artist who erected the Taj of Agra. No reason is given, no authority quoted.

- Third Anglo - Burmese War
- Tilak Starts Fergusson College in Pune (Poona)
- "The Life and Work of Sir Syed Ahmed Khan" by Col. Graham was published (Graham was commissioned as an officer in the Bengal Army in 1856)

Summary of events and explanatory notes

1. Politics and Archaeology

- 1.1 As noted previously, the "divide and rule" policy of the British Administrators went into full swing. In 1873 Syed Ahmed Khan's book "The causes of the Indian Revolt" was translated from Urdu into English by Sir Auckland Colvin (who was commissioned as an officer in the Bengal Army in 1856). His biography was written by Colonel Graham in 1885. He was awarded the Grand Cross of the Star of India on 1st January 1877 and within a week Viceroy. Lord Lytton laid the foundation of Khan's Anglo oriental college, the fore-runner of Aligarh Muslim University. He was appointed to the Central Legislative Council, first by Lord Lytton then by Lord Rippon.
- 1.2 Syed Ahmed Khan had accepted that the Kutb Minar was a Hindu tower. Beglar, one of Cunningham's assistants was also of the same opinion. But Cunningham overruled them both and stated that it was a Muslim tower (Archaeological Survey of India Reports volume IV). In 1885 the Governor-General-in-Council decided, to gag the employees of the ASI. They lost the power of interpretation. From then on, nobody could express his independent views. Everyone must now tow the official line. They must say "Yes Boss" - (That is also the policy today). And thus the Adinath Mosque, Sita ki Rasoi, Atla Devi Mosque and Vijay Mandir Mosque are all officially parts of Islamic Architecture;

2. History of Architecture

What the British Administration were doing officially, Fergusson was doing it privately. He expanded his "History of Indian and Eastern Architecture", after 21 years. He comes very near the truth, but his strong prejudice prevented him from admitting that Hindus did build arches and domes and that most of the so called mosques and tombs, are just usurped Hindu Temples. When he bluntly states "As these temples have long been used as mosques and tombs, they must logically be considered as part of Islamic Architecture" the sheer stupidity of his argument becomes obvious.

Why was he not challenged? There are two main reasons (I) by the time he published his expand book, Tilak had just graduated, G.K. Gokhale had just started in a secondary school, Gandhi was still in primary school, Patel was just born and Savarkar was still to be born; while the RIBA was 42 years old. Fergusson's book was hardly read by Indian readers, even in later years, as they invariably went for studies in law.

(II) The real architects, the Indian Mistries had, no knowledge of English and they would not be employed by Indian Government. Those employed by government had no real knowledge of Architecture, and dared not to criticise Fergusson. F.S. Growse explains this quite clearly. He did criticise Fergusson but he too fell for Fergusson's theories in general.

3. Indian History

We have seen how Prof. Dawson cheated, by simply not mentioning Taj Mahal at all. He was teaching at the Royal Military Academy, Sandhurst which trained British Officers for the Indian Army. They in turn occupied high official posts and followed the example of Prof. Dawson.

4. Tourist Guides

- 4.1 "Handbook to Agra" by H.G. Keene first came out in 1874 and over the next 40 years several editions were published. In 1874 he stated that Eesa Mohummad Effendi was sent by the Sultan of Turkey for building the Tahj Mahal. In 1879 he changed his mind and said that the Architect was the Italian - Veronemo, because Father Manrique said so. But he still does not say what buildings did Veronemo design and build in Italy, before being invited by Shah-jahan. It is incredible that Keene found nothing wrong with Manrique's claim of having seen the ladies of the Royal Mughal harem including Shahjahan's mother-in-law! A man of this calibre, because of his white skin remained President of the Archaeological Society of Agra for 34 years.
- 4.2 John Murray the famous publishers of London published a "Handbook of Bengal Presidency" for the first time in 1882. But all the usual information on Taj Mahal is just repeated and the author simply refers to Fergusson and Keene.

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Editorial

What do we understand exactly by the term 'common sense'? It actually indicates an uncommon exhibition of certain simple facts. Though it is called common sense, it is seen very rarely. Some fixed ideas are attached to the word 'common' in 'common sense'. It means simple, easy to understand, needs no explanation, obvious, difficult to forget, omit etc. So in short, common sense means a fact which is easy to see, easy to appreciate, easy to understand but in spite of all this, put together a fact which is easily not seen, easily not understood and easily forgotten. How contradicting is the actual meaning of words and the meaning expected or seen in reality !!

It was Velikovsky who used his common sense and attacked on the so called scientific sense of geologists, archeologists and historians. Velikovsky was a medical doctor and psychoanalyst who questioned the concepts of Solar System, challenged Darwin's theories of evolution and suggested the theory of origin of Venus.

All his theories and ideas based on common sense were nonsense to most of the historians and astronomers of 1950.

His book "Worlds in collision" came under fire even before it was published. Harlow Shapley then director of Harvard College observatory was his Chief opponent. Prof. Shapley openly said that 'if Dr. Velikovsky is right, the rest of us are crazy.'

When Macmillan & Co. in 1950, announced the publication of Velikovsky's book 'wprlds in collision' Prof. Shapley sought to block its release. He threatened to cut off his relations with the company. Similar letters from other scientist-authors and professors were received by the Macmillan & Co. In spite of all this pressure, Macmillan & Co., published the book. Thousands read the book, they saw merit in Velikovsky's ideas. The book became No.1, on the "New York Times" non-fiction best-seller list. But an unparalleled, unbelievable incidence took place in the history of publishing. Pressure on Macmillan & Co. to abandon 'Worlds in Collision' mounted so much that after eight weeks the Company transferred its rights to Doubleday and Company. Only crime of Velikovsky was that he believed in ancient scriptures, his common sense could see a common link in all stories of "Prālāyā" in almost all mythological books of ancient civilisations. He based his ideas on this common link, more than the findings of geologists, archeologists and historians who blindly disbelieved everything that was old.

It is very surprising that passage of time has proved Velikovsky more near the truth than scientists could imagine and believe.

In 1974, at a symposium of the American Association for the Advancement of Science (AAAS) Velikovsky said, 'But this symposium is, I hope, a retarded recognition that by name calling instead of testing, by jest instead of reading and meditating, nothing is achieved. None of my critics can erase the magnetosphere. Nobody can

Jupiter. Nobody can cool off Venus and nobody can change a single sentence in my books"¹

In 1983 Prof. Subrahmanyan Chandrasekhar, 73, received Nobel Prize for Physics for his outstanding research which he had carried out earlier and had predicted the process of death of SUN²

The prediction of Prof. Chandrasekhar was considered insane by contemporary scientists. Prof. Chandrasekhar's prediction was that the Sun would eventually shrink to a lump of material so dense that a cubic inch of it would weight about ten tons.

The prediction ws confirmed in 1926 when astronomers discovered SIRUS B a star that has once been as massive as the Sun and was now just such a super-dense object as the Professor had predicted.

It took several years for this research based on common sense and expressed in mathematical formulae to get recognition and honor from scientific institutions.

But this is not the end of the story of common sense. About 20 years back, Prof.P.N.Oak, announced his revolutionary theory of origin of Taj Mahal based on common sense. He was attacked, ridiculed and criticised by all available strength by historians and archeologists. His books are out of print but publishers have no courage to reprint them. Passage of time has proved Prof. P.N. Oak, more near truth than his critics, who knows that 21st century may announce Prof. P.N. Oak a genius historian of 20th century !!

Prof. P.N. Magazine's article on "Shankaracharya hill" in this number will help to clear all your doubts about its origin. Information about 'Dentistry' in ancient India', will definitely add to your knowledge about achievements of the ancient Indians in the field of medicine. You will find 'London Calling' equally interesting and surprising. News in brief/Press is the new column started from this number. We will welcome suggestions.

1. "Secrets of the Past", Berkey Books, New York, 1981.
2. "The Daily Telegraph", Monday, October 24, 1983.

The Shankaracharya Temple & Hill

By P. N. Magazine

The attention of a tourist, on reaching Srinagar¹, is drawn immediately towards the most attractive, conspicuous and ancient monument on a hill top, known as the Shankaracharya² temple, which has a commanding view from the top of the hill. It is about 300 meters high from Srinagar and to the east of the city. This temple, in Srinagar was first built by king Sandiman;³ a Hindu king, who, as per Tarikhi Hassan and Waquai Kashmir by Mala Ahmad, ruled Kashmir for 65 years from 471 to 536 Laukak era corresponding to 2605 to 2540 B.C. It was built on the top of the hill, "Jat Ludrak"⁴; in 480 Kali era or 2622 B.C. (See pages 394-96 and pages 80-82) with foot notes Tarikhi Hassan, Vol I and also pages 23 and 256 with foot notes Vol II of the same book), and now known as SHANKARACHARYA hill. This temple was named as "Jeshteshwara" by King Sandiman, and was later repaired and renovated by king Gopaditya,⁵ who, according to Dr Stein ruled Kashmir between 402 BC and 342 BC, making a difference of 33 years. This hill came to be known as the "Gopa hill" or "Gopadri", after the name of king Gopaditya, when he renovated it. This name was popular till lately, when this temple and the hill was dedicated to Adi Guru Shankaracharya, by the people of Kashmir, who had visited Kashmir earlier. His visit to Kashmir has also been confirmed by Sahebzada Gulam Hassan in his History of Kashmir. (See Tarikhi-Hassan pages 80-82 with foot notes, Vol. I).

Opinions differ as to when Adi Guru Shankara lived. Generally the authors place him between 788-820 AD while others place him in 200 BC. Opinion of some people is that he lived during the period of Abhinav

Gupta of Kashmir (9th. century AD), while others say, he lived between 993-1015 AD. All these dates are not historically correct and tenable. The correct date according to the historian and Sanskrit scholar like Kota Venkatachalam, and other contemporary companions of Shankara, and the authentic record left behind by them, is that Shankara lived between 509 BC to 477 BC. These dates are further supported and confirmed by Chitasukhacharya also in his authoritative book, "The Brihat Shankara Vijaya". The author of this book was a contemporary of Shankara, who was initiated by the Adi Guru and who remained as Shankara's companion till his death. Sukhacharya says that Shankara¹ was born in 2593 Kali era corresponding to 509 BC and that he attained Maha Nirvana (died) in 2625 Kali era or 477 BC. These dates are further supported by the chronologies existing in the Shankacharya Mathas of Kanchipuram and Dwarka etc., which were established by Shankara himself. As such, these dates are more authentic, believable and historically tenable, where the records are well preserved, maintained, in order, continuous and up-to-date, the authority of which is, therefore, unchallengeable. So the Adi Guru Shankaracharya, according to all available authentic contemporary records, lived between 509 and 477 BC, and not between 788-820 BC as generally presumed and believed by the historians and others, which dates are undisputable. It would be of much interest to mention here that Chitasukhacharya was associated with Shankara right from his 5th. year and also when Shankara became a "Sanyasi" (a monk) in his 10th. year. "Jina Vijaya" of the Jains also supports these dates.

Keeping the historical resources available in view that temple of Shankaracharya of Kashmir is over 4600 years old. (See Tarikhi Hassan Vol I and II - pages 80

Foot Note :

1. Summer capital of J & K State - 5200 feet above sea level.
2. 6263 feet above the sea level.
3. See introduction to Tarikhi Hassan by Sahabzada Hassan Shah, Assistant Director, Research and Publication Department, J & K State (1954 AD) on volume I. It also says that Sandiman ruled Kashmir for 65 years and is considered the 10th. ruler in serial order of the 35 kings missing in the Rajtarangini and discovered by Ghulam Hassan from Waqiaai Kashmir, written by Malha Ahmad - a poet during Sultan Zain-ul-Abdin's time, who translated "Ratnakar Puran" into Persian language from Sanskrit, giving the details of 35 missing kings of which Kalhana makes mention in the Rajtarangini, who ruled Kashmir about 5000 years ago. Sansarchand Kaul gives the date of Sandiman's rule in Kashmir as 2629-2564 BC in his book, "Sacred Temple of Shankaracharya". Anand Kaul and G. L. Kaul both support this date in their books, "Geography of J & K State" and "Kashmir through Ages" respectively. See also the details of "Ratnakar Puran" by Pt: Ratnakar in Tarikhi Hassan, vol II from pages 15 to 38.

Sandhiman between 2629-2564 BC, who built this temple first and later was repaired by king Gopaditya, who is placed between 426-365 BC by these authors :-

"Geography of Jammu and Kashmir" by Anand Kaul Bamzai, page 148 - chapter - "Ancient Monuments" (Revised edition).

"Kashmir through Ages" by Gwashial Kaul, page 194.

"Sacred Temple of Shankaracharya" by Sansarchand Kaul page 2. He however, places King Gopaditya in 1360 BC which appears a misprint.

4. The Shankaracharya hill was then known as "Jet Ludrak" and also as "Sandiman Parbat" when king SANDIMAN ruled Kashmir. Its earliest name was "Ajana" as mentioned by Mooris Raza in his book, "The Valley of Kashmir".

5. King Gopaditya renovated and repaired this temple. (See pages 394-96 vol I, and also page 50 vol II alongwith its foot notes of Tarikhi Hassan.

- 3b. These dates and the views are also supported by the following historians, who have published

- I. Birth and death dates of Adi Guru Shankaracharya, as mentioned above, are further supported and

to 82 and 394-96 Vol I and pages 23 and 50 Vol II respectively). It is also mentioned in the Tarikhi Hassan (history of Kashmir) that the entire stretch of land between the villages of Gupkar and Bhaksira-Vatika (now known as Buchhwara) in Srinagar was regarded as the property of this temple, for its maintenance and that of its "Langar" (free kitchen) by king Gopaditya. (see page 50 vol II Tarikhi Hassan and vol I pages 394-96 Tarikhi Hassan). Presently also 1500 kanals of land are credited to this sacred and most ancient temple of Kashmir in the Revenue Records but defacto, the temple does not own that land or gets any benefits out of it.

A statue of Adi Guru SHANKARACHARYA has been installed on the top of the hill, just below the temple, by the Dharmarth Department, which commemorates the Adi Guru's visit to Kashmir. But the important lacuna is that there is no mention why this hill and the temple are known after Shankaracharya, an indication of which is essential in public interests. Shankaracharya has undoubtedly visited Kashmir (Srinagar), in the 6th century BC, delivered discourses to the learned gatherings on the top of this hill and also the "Shastrarth" (religious discourses with the Kashmiri lady here) as mentioned hereafter. He also meditated on this hill top in this ancient temple for some time. (see pages 80-82 Tarikhi Hassan, vol I with its foot notes).

Tradition and history indicate that Adi Guru Shankaracharya was a Vedantist, who revived the declining Hinduism in India by spreading the message of Vedas, declaring that the Vedas were supreme and the top most scriptures of the Hindu religion and stemming the tide of Buddhism in the country, winning for himself immortal name and fame. He, undoubtedly, deserves the credit for reviving the declining influence of the Hinduism throughout the length and breadth of India.

He visited Kashmir also with the intention of winning over the Kashmiris, who, though not disbelievers in the Vedas were most of them under the spell of Buddhism then. During those times, Kashmiris were till lately, culturally and spiritually, much ahead of others in the country and believed both in Shiva and Shakti from times immemorial. Shankara did not believe in Shakti Cult then.

Shankara's visit to Kashmir is placed by Hassan, the author of Tarikhi Hassan (HISTORY OF KASHMIR) before the rule of King Gopaditya of Kashmir, who according to Hassan ruled Kashmir between 402 BC. while according to Dr Stien, he ruled between 369 BC. to 309 BC, when this hill was known as "Jeth Ludrak". This further confirms, he lived between 509 BC to 477 BC. (See Tarikhi Hassan vol I, pages 80 to 82.

His visit to Kashmir is also confirmed and supported in a book, "The Great Acharyas", published by G.A. Nateson and Co., in 1923. In this book, Krishna Swami Aiyer, MA, quotes the records of Madhvacharya (born 1180 AD) - preserved in Shrine Sri Math Library, says :-

" _____ Shankara had gone to Kashmir to win the famous seat of learning, which was meant as a prize to the wisest of the man _____".

No importance was attached to the visit of the great Shankara by the contemporary Kashmiris. Shankaracharya camped outside the city of Srinagar along with his party since no arrangements for his board and lodging were made as planned by Kashmiris. The visiting party almost starved as fire was not made available to them for preparing their meals as no match sticks were available then.

It is said that seeing the plight of the visitors, a young girl was sent to meet Shankara in his camp to enquire what the trouble was? The visitors informed the girl that ever since they arrived in the vicinity of Srinagar they had to go without food for want of fire which was not made available to them by the people of Kashmir. They also complained that the Kashmiris did not extend any courtesy or cooperation to their leader.

The girl enquired from Shankara, "Sir, you are so great, can't you even make a fire?".

He expressed his inability and helplessness. Then the girl picked up two thin wooden sticks (Samidhas) into her hands, recited some Mantram and then rubbed the two sticks.

Lo and behold! fire was immediately produced by the friction of the two sticks to the great surprise of

a. In Sushma of Atma Bodha, quoting a chronogram appearing in PRACHINA SHANKARAVIJAYA, Adi Shankara was born in 509 BC.

b. A copper plate inscription of king Sudhanva dated 478-477 BC, addressed to Adi Guru Shankaracharya, as reproduced on page 29 of VIMARSA by a recent Head of the Dwarka Peetha.

c. In PUNYA LOKA MANJARI; Guru Ratna Malika and Sushma, the Kamakoti Peetha Lineage of disciples succeeding to Shankaracharya Pontificate, is recorded.

d. JINA VIJAYA, a Jain scripture, as already mentioned above supports a chronogram putting the date of birth of Shankara at 509 BC. This scripture of Jains records the date of Kumarul Bhat who was also a contemporary of Shankara, as 557 BC, who was 48 years older than Shankara, and therefore, Shankara's date of birth comes to 557 minus 48 years = 509 BC. This date is

also mentioned in "Brihat Shankara Vijaya" by Chitasukhacharya as mentioned already. This Jain scripture puts the date of Maha Nirvana of Shankara as 477 BC at the age of 32 years.

e. Date of Shankara's visit to Nepal during the reign of king Vrisha Deva Verma, who ruled Nepal between 487 BC to 448 BC as given in the Nepalese Dynastic History.

f. The planetary positions at the Shankara's birth, as mentioned by Chitasukhacharya, tally with the description of the planets in 509 BC as confirmed by the world famous Astrologer of India, Dr. B.V. Raman in his book, "Notable Horoscopes".

g. Shri Kota Venkatachalem of Andhra, who did a great historical research in the chronology of ancient history of Hindu period ever since Mahabharata period, also categorically confirms the dates of birth and death of Shankara, as mentioned above.

Shankara and his party. They rejoiced and had their meals prepared which gave them relief.

A compromise then followed between the visitors and the Kashmiris. A "Shastra" (a religious discourse) was arranged between Shankara and a Kashmiri woman, which continued for 17 days on the hill top of the "Jet Ludrak", in the temple of Jeshteshwara, now known as Shankaracharya temple and hill. Shankara had ultimately to yield before the lady in this discourse and, therefore, accept the predominance of the Shakti cult (greatness of Devi). This was the reason why he later wrote his famous book, "The Saundar Lahri", on the top of this hill, in praise of Shakti - The Divine Mother. It is a masterpiece among Shankara's works. On his accepting the supremacy of the Shakti in Kashmir as predominant, the Kashmiris, much later after him, dedicated this temple and the hill of "Jeth Ludrak" (Gopadri) to the memory of Shankara's visit to Kashmir, in recognition of his greatness. Therefore, both the hill and the temple, thereafter, came to be known as Shankaracharya. (See Tarikhi Hassan vol I, pages 80-82 foot note No: 166).

After his stay in Kashmir (Srinagar) Shankaracharya went to Sharda, a famous contemporary University of learning, glory and light, situated about 100 kilometers to the South-West of Srinagar and now in the occupation of Pakistan. Here he was awarded a degree of SHARDAPEETHA, the highest academic honour conferred on any dignitary visiting the great shrine of the Goddess and the Sharda University of Kashmir. It also entitled him for JAYAPATRA (a certificate of Scholastic invincibility). On returning from his Kashmir visit Shankara became a staunch devotee and worshipper of Sharda Devi (Saraswati) and Shri Chakra - the symbol of Devi (Goddess).¹

Nothing is known about the original Shiva Lingam installed in this temple when king Sandiman built it first. The present Lingam, in the temple is installed by Maharaja Ranbir Singh of the State (1829-85 AD). There were also over 300 golden and silver idols of various deities in this temple but nothing is known yet how these precious idols were lost. (See page 23, vol II of Tarikhi Hassan). Besides this temple had dozens of rooms where the devotees used to stay for meditation purposes which too are untraced there.

This temple was repaired by king Lalitaditya of Kashmir (693-735 AD) and various other Hindu kings of Kashmir. (See Tarikhi Hassan, vol II, page 87). Besides Sultan Zain-ul-Abdin (824-875 Hijra) also repaired its roof, which had tumbled down during an

earthquake, as a gesture of goodwill towards the Hindus of Kashmir in 854 H-ijri. (See page 197 vol II Tarikhi Hassan). After getting the temple repaired, Zain-ul-Abdin got inscribed three verses in Persian language on the pillars and the walls of the temple as mentioned hereafter. Sheikh Gulam Mohi-ud-Din, a Governor of the Sikh regime 1841-46 AD) also repaired its dome. Maharaja Gulab Singh of J & K State also got its dome repaired during his reign. Surprisingly temple was not broken or damaged by Sultan Sikandar (Butshikan-Iconoclast), who ruled Kashmir between 1389-1413 AD and destroyed almost all temples and Hindu shrines in Kashmir and forcibly converted the Hindus of Kashmir to Islam. (See Tarikhi Hassan vol I, pages 394-96). Swami Shivratan-anand Saraswati also repaired the dome of this temple. Presently this ancient temple is under the control and management of Dharmarth Trust, and is also looked after by a Managing Committee known as "Shankar Sewa Dal", which is a team of dedicated devotees and workers.

It is very essential to make some mention here of the controversial Sandiman. In the Tarikhi Hassan, Vol I, a mention is made of three Sandimans. According to the author of this book, Pirzada Gulam Hassan, the first Sandiman ruled Kashmir for 65 years, from 471 to 536 Laukek era, corresponding to 2605 to 2540 BC. Mala Ahmad also supports it in his book "Waqiai Kashmir" - a history of Kashmir. Sahebzada Hassan Shah, Assistant Director, Research and Publication Department, J & K State has also supported this date in his introduction to Tarikhi Hassan.^{II} This Sandiman built "Jeshteshwara temple", known now as the Shankaracharya temple, on the top of "Jet Ludrak" in 480 Kali era or 2622 BC by which name the hill was known then. This Sandiman therefore, can in no way be taken as Solomon, as he (Solomon) was born more than 1700 years after this Sandiman or after the construction of this Shiva temple.

The second Sandiman, who is much published and exploited as Solomon, of whom Hassan makes mention at page 41 in the second volume of his history of Kashmir, is said to have visited Kashmir by air, as quoted above, sometime in 1818 Laukek are when King Narendra succeeded his father Damodhar II, which corresponds to 1258 BC, just after the death of king Damodhara, who, according to Hassan ruled Kashmir from 1786 to 1818 Laukek era, corresponding to 1290 to 1258 BC. This Sandiman is said to have come from the west by air and stayed and toured

I. See "Shankar Digvijay" giving life history of Shankara.

II. Sahebzada Hassan Shah, Assistant Director, Research and Publication Department, J & K State, writes about "Waqiai Kashmir" in his introduction to Tarikhi Hassan, as under :-

"It (Waqiai Kashmir) is a translation of a history written in Sanskrit, namely "Ratnakar Puran". It contains an account of thirty five kings, who ruled over Kashmir five thousand years ago, and also of seven kings, who ruled from the end of the second to the beginning of the sixth century. These accounts were lost to the history (see J.A.S. B. vol ix No: 5, 1913, p 195). OUR author used the book with benefit for the Gurukul Kangri Collection, Haridwar

dealing with ancient Kashmir (page 3 of the introduction).

It is from "Waqiai Kashmir" that he (Hassan) has taken the account of the thirty five missing kings in Kalhana's Chronicle as also of the kings who reigned before and after Ranaditya (whose reign according to Kalhana extended over 300 years) from 191 to 414 AD and 474 to 521 AD. A list of these kings is given below to illustrate the importance of this rare contribution by our author.

The list of 35 kings, whose names and deeds, according to Kalhana have perished through the destruction of records is given below :-
(see section I, note 72, p 13, Stien's Rajtaringiri, Gurukul Kangri Collection, Haridwar)

Kashmir for a week and returned back after establishing his throne on the top of the hill, "Jet Ludrak", known now as the Shankaracharya hill. (See Tarikhi Hassan vol II, page 41). This view is supported by Malla Ahmad as well in "Waqiai Kashmir". This Sandiman is much exploited to be the Solomon but this Sandiman cannot also be taken as Solomon because his supposed visit or appearance in Kashmir is dated to be 1258 BC when Solomon was not born. His birth has taken place about 400 years after the death of king Damodhara or 1818 Laukek era. According to Malla Ahmad, as quoted by Hassan, Kashmir remained under water then, especially from Bijbehara down below to Srinagar, and therefore, Solomon is said to have chosen to stay on the top of this hill and alleged to have later desiccated the waters of the "Satisar" on the request of the people of Kashmir. This Sandiman is taken by various recent historians including Gulam Hassan and Malla Ahmed to be Solomon, ignoring the fact that Solomon was not born then, who is said to have established his throne on this hill top and, therefore, they attribute the base of this temple to be the "Takhti Sulaiman" (Solomon's throne), which is historically untenable, as

Solomon was born 400 years after this date. In this way they have started negating the true ancient records and moreso Kalhana's Rajtarangini, Ratnakar Puran as translated by Malla Ahmad and the Nilamat Puran which unequivocally say that the "Satisar" was desiccated by sage Kashyapa, thousands of years before Solomon, after whose name Kashmir is known. That is why the Muslims insist on calling this hill as "Kohi Sulaiman" (Solomon's hill). There is no justification for or any relevance for the name Solomon's hill or Solomon's throne being in Kashmir, since Islam is only 1400 years old and SOLOMON is born about 1000 years before Islam, and moreso 400 years after king Damodhara's death in 1818 Laukek era. And because of all the pre-14th: century AD historical records are quite silent on this important subject where there is no mention of Solomon anywhere. These historians have failed to quote any genuine evidence or reference associating with the name of Solomon with the hill from any ancient relevant records or about his alleged visit to Kashmir, which could justify their claim.

There is no evidence available either in the Holy Bible to support or substantiate the view that Solomon was known by the name of Sandiman as well or that he had visited Kashmir or had changed his name to Sandiman on reaching Kashmir. It is therefore, all a myth and a made up theory, not based on any sound reasons or grounds. Solomon never came to Kashmir. The question arises what interest or temptation had he in coming to Kashmir and establish his throne in a place which had water around it or had no population or habitation there, as presumed by these authors. Nor has he left any impact behind or any followers of

his faith in Kashmir which could justify his visit to Kashmir.

It is also surprising to note how Kashmir became overnight "Bagi Sulaiman" (Solomon's Garden), the Shiva Temple on the hill top as "Takhti-Sulaiman" (Solomon's Throne) and the hill as "Kohi Sulaiman" (Solomon's hill) from "Gopadri hill" during the Muslim rule in Kashmir - which rule started during the 14th: century AD and not before. Why these important historical events have remained unknown to the ancient historians of Kashmir (pre-14th: century historians) for about 2300 years of Solomon's birth and his presumed visit to Kashmir is for the readers to guess what a myth and a fake claim it is.

It is of great importance to mention here that Malla Ahmad, author of "Waqiai Kashmir" (translator of Ratnakar Puran - the ancient history of Kashmir in Sanskrit language) categorically admits that this hill was known then as "Jet Ludrak" and later as "Sandiman Parbat" when Sandiman - the Hindu king of Kashmir built this temple about 4600 years ago. The ancient history of Kashmir is quite clear on the fact that this hill came to be known later as "Gopadri" or "Gopa hill", when king Gopaditya repaired and renovated this temple between 369 BC - 309 BC, which name continued to be in use till lately (say till long after king Praversen II ruled Kashmir), when the Hindus of Kashmir dedicated it to the sweet memory of Adi Guru Shankaracharya's visit to Kashmir, as admitted by Pirzada Gulam Hassan also in his "History of Kashmir, vol I, page 80-82". In view of these glaring facts it is therefore, a fake claim and a surprise to call this hill as "Solomon's hill", or presume that Solomon visited Kashmir in 1818 Laukek era and stayed for a while on this hill top and established his throne there overnight, which had absolutely no purpose, justification or aim to serve as his over all stay in Kashmir is said to be only one week during which period he also is said to have toured whole of Kashmir, and therefore, he could have not got much time to stay on "Jet Ludrak" and establish his throne there, when the present temple was already existing there for hundreds of years according to the same historian.

The third Sandiman, who later came to be known as Arya-Raja ruled Kashmir for 47 years from 35 BC to 12 AD cannot also be taken as Solomon because he was a Hindu king, while Solomon lived about 900 years before this Sandiman, according to all available sources. (SEE Tarikhi Hassan vol 2, pages 52 and 57). In view of the aforesaid recorded evidence, it is futile on the part of those who wrongly presume this Sandiman to be Solomon. It is absolutely a fake claim to consider this Sandiman as Solomon. There was no justification for Solomon to have changed his name to Sandiman on reaching Kashmir or before that. Solomon is dated about 900 BC and not 1296 BC as presumed by Hassan and other authors. This theory from the very face of it is a clear myth, fake claim and a mere imagination and, therefore, historically unbelievable and untenable. This Sandiman did not exist during king Gopaditya's time as presumed by some authors. He was a minister of king Jayendra (72 BC to 35 BC), who later became the ruler of Kashmir as Aryaraja.

Sultan Zain-ul-Abdin, who ruled Kashmir from 1420 to 1475 AD, corresponding to 827 to 879 Hijri, repaired this temple in 854 Hijri. This date is also supported by Pirzada Gulam Hassan, who says that 54 falls

- I. It is to be noted here that Nilamat Puran is the oldest book of Kashmir and is more than (5000 years old of which a sufficient proof is available in the Rajtarangini of Kalhana. Lord Krishna of Mahabharata has quoted from this Puran while enthroning queen Yashovati in Kashmir (3066 BC according to "Waqiai Kashmir" or Ratnakar Puran), who ruled Kashmir after the death of her husband, Damodhara I, during the Mahabharata period. It is historically incorrect to say that Nilamat Puran is composed in the 6th: or 7th: century AD.

in the reign of Zain-ul-Abdin, which naturally comes to the year 854 Hijri as mentioned by an unknown author also in his History of Kashmir, "Baharistani Kashmir", at page 169. (This unpublished manuscript lies in the Archives Library of J & K State). It is quite evident from this unpublished book, written in Persian language on Kashmir, that it is written by the author in 1586 AD and completed in 1614 AD, corresponding to 994 Hijri and 1023 Hijri respectively which further supports the date being 854 Hijri following during the reign of Sultan Zain-ul-Abdin when he repaired the said temple in 854 Hijri as was got inscribed by him on the foot steps and the northern wall of the temple. (See pages 394-96, Tarikhi Hassan, vol II). This date should have been fresh in the memory of the author and also recorded by his great-grand-father, Malla Hassam-ud-Abdin who was in Kashmir during Zain-ul-Abdin's rule. Sultan Zain-ul-Abdin had died only 144 years back when this unpublished book is said to have been written. As such this unpublished book is not so ancient as presumed to be and given much importance and publicity.

Historians like Mulla Nadri, Mufti Gulam Nabi Khanyari, Mirza Saif-ud-Din Beig, Narayan Kaul Ajiz, Haidar Mallick and other historians also support the view that this temple was constructed by Sandiman, a Hindu king of Kashmir (2605 to 2540 BC), and later renovated by king Gopaditya of Kashmir, who ruled between 369 to 309 BC, according to Dr Stien and various other scholars, and not between 88-148 AD as presumed and fixed by Khan Nazir Ahmad in his book, "Jesus in Heaven on Earth", simply to suit his convenience and to make fake efforts to establish his imaginary theory of Christ having been buried in Kashmir. The year 54 is further supported and confirmed by the inscriptions on the temple walls as mentioned by various earlier writers in their respective books. These inscriptions support this date being 854 Hijri falling during the reign of Sultan Zain-ul-Abdin. One of the inscriptions on the northern wall categorically supports the view that Yuz Asaf of Egypt, who claimed to be a Prophet, being in Kashmir during the repairs of this temple by Zain-ul-Abdin in 854 Hijri. (See page 394-96, vol II, Tarikhi Hassan). This inscription as mentioned by earlier Muslim authors is ignored now by the modern authors.

The inscriptions on the temple walls are as under :-

1. "Mahimar een satoon Raj Bihishti-Sali Panjah wa Chahar" (The mason of this pillar is Bihishti Zargar - Year fifty four).
2. "Ean satoon bar dast Khwaja Rukum Bin Murjan-Sal Panjah wa chahar". (Khwaja Rukum son of Murjan erected this pillar in the year fifty & four).
3. The third inscription on the northern wall of the temple, as mentioned elsewhere as well, is the following which inscription is being ignored by these authors :-

1. Author of this book is presumed to be Mirza Mehdi whose great-grand-father is supposed to be Malla Hassam-ud-Din, who came from Gazni during Zain-ul-Abdin's time. (See page 8, introduction to Tarikhi Hassan by Sahebzada Hassan Shah, Assistant Director, Research and Publication Department, J & K State.

"Dareen Waqat Yuz Asaf nam Jawane az Misar amdah Daiwai Paigambr zadgi me kunad - sali chehar wa panjah". (During this period (period of repairs of this temple by Zain-ul-Abdin in 54), a young man, by name Yuz Asaf, came from Egypt, who claimed to be the son of a Prophet). (See page 394-95, vol II, Tarikhi Hassan).

This categorically refutes the claim that this Yuz Asaf being Christ, who lived in 1st: century AD and not in 15th: century AD - during Zain-ul-Abdin's rule. The famous historian, Dr. Sofi of Pakistan and also author of History of Kashmir (Kashir) confirms at page 40, vol I of his book that Yuz Asaf came to Kashmir as an ambassador from Egypt during Badshah (Zain-ul-Abdin) who later became a saint. He denies Yuz Asaf being Jesus Christ.

There is no trace in any ancient record to prove any Muslim influence or names existing in Kashmir about two thousand years back or earlier. Since Islam was born 600 years after Christ, Muslim names were introduced into Kashmir only during the 14th: century AD. Muslim labour was engaged by Sultan Zain-ul-Abdin to repair this temple in 854 Hijra, as is quite evident from Tarikhi Hassan and other historians. Besides, the aforesaid inscriptions being in the sulus script, also proves beyond doubt, that this temple was repaired after the 14th: century AD when this script came to be known in Kashmir. It is a historical fact that no other language than Sanskrit prevailed in Kashmir till 14th: century AD and even thereafter for quite some time.

If we take for granted Khan Nazir Ahmad's assertion that Gopaditya ruled Kashmir from 3154 to 3224 Laukek era corresponding to 88-148 AD (which no doubt changes the established chronological order and is also historically incorrect), then also we can very safely dismiss the theory about Jesus ever having come to Kashmir and being buried there. According to Hassan, Gopaditya ruled between 402 to 342 BC, which further disproves Nazir Ahmad's theory. Malla Ahmad in "Waqiai Kashmir" also refutes Kh Nazir Ahmad's claim and gives Gopaditya's date of rule between 402 - 342 BC or 2674 to 2734 Laukek era and not 3154 to 3224 Laukek era as supposed by Kh Nazir Ahmad. This date does not fit, in anyway with the Christ's stay in Kashmir, as he is supposed to have been crucified at the age of 33. Then he should have died in Kashmir sometime in 84 AD, at the age of 117, which is not the date of the rule of king Gopaditya, as wrongly fixed by Kh Nazir Ahmad. It is a historical fact, beyond doubt, that Sandimati or Sandiman was never a minister in Gopaditya's time but during the rule of king Jayendra, who ruled Kashmir between 72 and 35 BC (as per chronology fixed by Dr Stien and other scholars. But according to Hassan and Malla Ahmad Jayendra ruled from 82 to 45 BC which further disproves Kh Nazir Ahmad's theory. This Sandiman later became the king of Kashmir as Aryaraja as already mentioned earlier.

It may be made clear here, once again, that there was no minister by the name of Sandiman or Sandimati in the cabinet of king Gopaditya or name sake during his rule as presumed in a book, "Jesus in Heaven on Earth" and by some other writers, which is quite a fake assertion.

The sacred orthodox octagonal basement of this

ancient temple on the top of the Shankaracharya hill (Gopadri), constituted of massive and huge blocks of stones without using mortar, is believed by the historians and archaeologists to belong to a very ancient period. General Cunningham has assumed and identified it as "Jayeshtrudra" temple built by king Jaluka son of Ashoka of Kashmir (1726 Laukek era or 1350 BC) which is not accepted by Dr Stien in his translation of Kalhana's Rajtarangini and other historians and archaeologists, which historically also is incorrect and untenable. (See pages 440-90, Rajtangini, vol II).

According to Geography of Jammu and Kashmir by Anand Kaul Bamzai, page 148, there were steps of sculptured stones beginning from Shurahyar (Shudshyar near present Sonawar) temple of Goddess Tripura Sundari on the bank of the Jehlum river and leading right to the top of the hill, which were later dismantled. With these stones from the stairs leading to this temple, the mosque known as Pathar Masjid, near Zaina Kadal in Srinagar city, was built by Noorjehan, the queen of Jehangir. This mosque still exists in a good condition.

The Buddhists have great reverence and faith in this temple and call it Pas-Pahar.

Mrs Walter Tibbits gives the following description about this temple in her book at page 131-32, "Cities Seen In East and West" : -

"The hill is rough and jagged as the path of yoga (the path of union with God). The elements have even stained it every shade of ochre, the colour sacred to the Lord of Universe. Sharp rocks break the path as the triads of the way cut and wound the feet of the aspirant to knowledge. On this summit stands a small fane of grey stone. Its columns are fluted, its dome is round, surmounted by a trident. Inside is one thing only, an upright black stone.

"Deep in the temple's inner most shrine is set, Where the bats and the shadows dwell, The worn and ancient symbol of Shiva at rest, In its oval shape."

"The Lingam is the oldest religious symbol in the world. It is also the simplest. But to the Shaivites no gorgeous imagery of the Mass, no elaborate ceremonial _____, can compare with the solemnity of that black stone, _____"

"Guardiana of the austere glories of Maheshwara, crowning the fort like hill, highly serene, ascetic, bearing no ornament save that of the quiet spirit of Shiva himself, the Jeshtrudra¹ shall command the happy valley long after we and those that come after, shall have passed away _____".

It is very regrettable that a reputed epigraphist and historian like Dr Jaggan Nath Aggarwal, inspite of so much undisputed historical evidence available as to its most antiquity, should propound that this temple was constructed during the fourth century AD. This is an imaginary assumption, and against the available recorded evidence which that scholar has not cared to consult. His assertion is misleading and historically untenable. (See "The Times of India," New Delhi dated 23-5-1979, page 4, column 4).

Under the circumstances mentioned above there is absolutely not even an iota of evidence available to prove that the basement of this temple was built by Solomon for his throne, and that therefore, it is known as Takhti Sulaiman (Solomon's Throne) or that it was built in the fourth century AD. These assumptions are not substantiated by any record, and are a recently created myth. To say so, is a wishful thinking, as the temple was first built in 480 Kali era or 2622 BC by king Sandiman (2622 BC to 2540 BC), a Hindu king as per the authentic evidence available. At that time Solomon was not known to the world or born. (Dr Stien, in his English translation of Kalhana's Rajtarangini, says, "The present name of the hill, meaning Solomon's throne (Takhti Sulaiman) is undoubtedly of Mohamedan origin _____").

The octagonal base of this temple is laid according to the orthodox way of Hindu tradition, which has nothing in common with the Jewish customs that Solomon, obviously followed. The steps leading to the temple are in accordance with Shaiva philosophy. The first ascent being of 18 steps followed by 12 steps. Then it is further followed by six steps on either sides enabling to enter the temple. This makes a total of $18 + 12 + 6 + 6 = 36$ steps which is in accordance with the 36 elements of which the Universe, from Shiva Tattva to Prithvi Tattva, is made. (See "Sacred Temple of Shankaracharya by S. C. Kaul").

As such this disproves the theory that this is Solomon's hill or the temple is Solomon's throne, which assumption is baseless and imaginary having no basis. This is the most ancient temple existing in Kashmir - nay perhaps in whole of India, I believe, which is still in good condition and worshipped by lacs of people every year.

Gopi Kunj, Karan Nagar,
Srinagar 190010.

DEVA VANEE MANDIRAM, Bombay 4.

Children's troupe to go abroad.

Shri Velankar, Founder President of Deva Vanee Mandiram of Bombay is leading the children's troupe to Europe possibly in October 1984. Shri Velankar, S. B. who retired as Senior Member Posts and Telegraphs Board and additional Secretary to the Govt. of India, 11 years ago, has been a lover, promotor, a writer of Sanskrit throughout his life. He is now entering 70th year and has more than 40 Compositions (books) to his credit. He has, after retirement devoted himself entirely to Sanskrit.

The troupe intends to present a Sanskrit-music-dance-drama 'Balageetam Ramacharitam' based on Ramayana episodes and composed by Shri Velankar. Children range between 12 to 14 years. They had taken these songs to South East Asia 18 months ago. Indian Council for Cultural Relations will be supporting them with air passage. Colourful costumes are used.

This is the first programme of its kind ever composed and performed thus in Sanskrit. Various eminent persons have contributed their efforts for the programme. We wish the troupe all the success in the Venture.

Those desirous of assisting the venture can contact Shri Velankar at Tel. No. 351919.

1. It should be Jeshteshwara and not Jeshtrudra.

Growth and Practice of Sanskrit Studies in Belgium

By G. Pollet

1. History of Sanskrit teaching

Sanskrit has been taught in Belgium for nearly one and a half century. The first course of Sanskrit was started in 1841 by Professor Felix Nève (1816-1893) in the Faculty of Arts of the University of Leuven. His successors in the same university were Charles de Harlez (1832-1899) in 1867, Philemon Colinet (1853-1917) in 1886, Albert Carnoy (1878-1961) in 1903.

At present, Sanskrit is taught in four Belgian universities. In the University of Ghent, Prof. J. Deleu has been alone in charge since Prof. A. Scharpe retired in 1979. In the University of Leuven, I succeeded Prof. A.J. Van Windekens in 1965. Dutch is the medium language of instruction in the two above-mentioned universities. French is the medium language in the University of Louvain-la-Neuve, where Sanskrit has been taught by Prof. D. Donnet since the retirement of Prof. E. Lamotte in 1974, and in the University of Liege where Prof. L. Derooy is in charge of Sanskrit.

Apart from these four universities, the University of Brussels had a four-year Sanskrit course in the fifties and sixties which was discontinued after Prof. L. Rocher moved to the U.S.A. to become a professor of Sanskrit in the University of Pennsylvania, Philadelphia. During the forties and fifties, the University of Namur also had a two-year Sanskrit course, started by Prof. P. Johannis and taken over by Prof. J. Masson.

2. Research in the field of Sanskrit and Indology

2.1 Sixteenth to nineteenth centuries.

Contact between India and Belgium can be traced back to the early 16th century. Literary documents of that period include an anonymous travel account, in Dutch, of the second voyage of Vasco da Gama from Portugal to India in 1502-1503. A fac-simile edition of this account, annotated by J. Denuce was published in Antwerp in 1931. Another anonymous account, in Dutch, of a voyage from Lisbon to India was published in Antwerp as early as 1508. The port of Antwerp remained a European centre for trade with India till 1585, when the town came under Spanish rule and had its access to the North Sea cut off by the Northern Netherlands. New commercial links with India were gradually made by the port of Ostend and became particularly flourishing in the first half of the 18th century, when the Ostend Trading Company founded settlements in India.

Accounts of the Antwerp trade relations have been given by several historians, e.g. by J. Staes (in Dutch) in 1883, by A. Pierrard (in French) in 1930 and by S.T. Bindoff (in English) in 1945. The Ostend Company and its settlements have been described by H. Huisman (in French) in 1902, by G. Lefevre (in Dutch) in 1925, by F. Prims (in Dutch) in three volumes dated 1925 to 1927, and by M. Laude (in French) in 1944. Personal accounts by Belgians

of their travels to India became more frequent from the late 19th century onwards and include the publication (in Dutch) by E.J. Ossenblok, dates to 1903.

At university level, Indological research was gradually intensified during the second half of the 19th century. Prof. C. de Harlez (see above, para 1) concentrated on Vedic and Avestan literature. In 1881 he started the first Belgian oriental review, entitled "Le Museon". Prof. P. Colinet was an expert on comparative grammar of the Indo-European languages, with special reference to Sanskrit and Greek. At the end of the 19th century and in the beginning of the 20th century, Prof. L. de La Vallee Poussin introduced the study of Buddhism.

2.2 Twentieth century

From the early 20th century onwards, Prof. A. Carnoy (University of Leuven) continued the work of P. Colinet and compared Sanskrit with the other Indo-European languages. Since about 1930, Prof. E. Lamotte has been studying the early Buddhist texts in Sanskrit, Pali, Chinese and Tibetan with a view to publishing an extensive history of Buddhism. In much the same line Prof. J. Masson published a volume on the Pāli sources of popular Buddhism while Prof. M. Hofinger pictured the lives of the Buddhist saints (1953). More recently, since the late seventies, research on Buddhism has been continued by two students of Prof. E. Lamotte, viz. Dr. J. Van den Broeck and Dr. M. Van Velthem.

Again in the University of Leuven, Prof. A.J. Van Windekens (retired in 1983) produced several volumes on Tocharian, with ample reference to Sanskrit, and on its links with the Prākritis, Apabhraṃśa and the early New Indo-Aryan languages, with special reference to early Brajabaṣa language and literature. Prof. P.H.L. Eggermont has been specializing in Asokan history and in the early relations between India and Greece. Prof. F. De Graeve has written several articles on Hinduism and Buddhism. Prof. M.P. Baudot is doing research on early Indian art and archaeology. Dr. W. Callewaert is editing and commenting on early Hindi nirguna texts.

Most of the above research has been published in the Leuven monograph series "Bibliothèque du Muséeon" (1929-1969) and, from 1970 onwards, in either "Orientalia Lovaniensia Analecta" (series of the Oriental Institute of the K.U. Leuven) or "Publications de l'Institut Orientalists de Louvain" (series of the U.C. Louvain-la-Neuve).

A special series on ancient Indian topography, entitled "Corpus Topographicum Indiae Antiquae" was jointly founded in 1974 by the Professors A. Scharpe, J. Deleu (University of Ghent), P. Eggermont and myself (University of Leuven). In this series the first volume "Epigraphical Find-spots" was composed by Dr. R. Stroobandt (University of Ghent, 1974). The second volume, "Archaeological Place-names" is being finalised at present by the Leuven team. A third volume, "Topographical Names in the Vedas, Rāmāyaṇa, Mahābhārata and the Purāṇas" is being prepared in Leuven by Dr. W. Callewaert.

In the University of Ghent, Prof. A Scharpé has been critically editing Kālidāsa works and his "Kālidāsa Lexicon" is near completion. Prof. J. Deleu is focusing his research on early Jaina texts. Prof. W. Couvreur has been mainly dealing with Indo-European linguistics, Tocharian and Sanskrit. A series of monographs, entitled "Orientalia Gandensia" (Series 3) was started in the University of Ghent in 1958.

In the University of Liège, Prof. L. Deroy is doing research on Sanskrit and Pali literature. Prof. J. Duchesne-Guillemin has written monographs and articles on Indian and Iranian religions and on Indo-European linguistics.

In the University of Namur, the late Prof. P. Johanns wrote several books on Hinduism in general and on Vedānta.

Quite a few Belgians emigrated to teach or undertake research in the field of Indology. Only some of them are mentioned hereafter. L. Rocher, formerly in the universities of Ghent and Brussels, is now Prof. of Sanskrit in the University of Pennsylvania, Philadelphia, where he continues his research on the Purāṇas and on Sanskrit law-texts, whereas his wife, Prof. Rosane Rocher, has publications on early Sanskrit grammar and on his history of Indology. Prof. K. Bulcke (1909-1982) spent more than forty years in India (Allahabad, Ranchi) and became a renowned expert on the Rāmāyaṇa. He also published an English-Hindi dictionary. Prof. R. Antione spent most of his life in Calcutta, where he published several volumes on Sanskrit morphology and syntax. Prof. J.T. Jordens is now Head of the Department of Asian History and Civilisations, in the Australian National University, Canberra. His publications deal with the Bhagavadgīta and, more recently, also with the modern history of Hinduism.

3. Media for issuing information on Sanskrit

3.1 Periodical literature

As already stated above (para 2.1), the first oriental periodical was "Le Musée". Founded in Leuven by the Indologist Prof. C. de Harlez in 1881, it is in principle a quarterly, though it has been published lately as two double volumes per year. It deals with oriental studies in general and regularly includes contributions on Sanskrit literature and language.

Between 1964 and 1967, the Oriental Institute of the University of Ghent published a series of year-books, called "Orientalia Gandensia" (Series 2), with several articles, in Dutch, on Sanskrit and allied subjects.

In 1970, the Department of Oriental Studies of the University of Leuven founded an international periodical, entitled "Orientalia Lovaniensia Periodica". Its annual issues of about 300 pages include a large section of scientific articles on Indian classical literature, linguistic, philosophy, archaeology and art.

In October 1981, the Oriental Information and Documentation Center "Inforient", based in the Department of Oriental Studies of Leuven University, started a monthly periodical, called "Inforient-Dossier", which brings general information (in Dutch) on cultural and other aspects of India, China and the Islamic world.

The "News Bulletin of the International Association of Sanskrit Studies" is publishing special three-yearly issues, entitled "Sanskrit Studies outside India" and includes reports on the progress of Sanskrit research in Belgium.

3.2 Various media.

The Belgo-Indian Association, based in Brussels and patronized by the Ambassador of India, organizes every year a series of lectures on Indian literature and culture, as well as an introductory Hindi course.

The Inforient Center in Leuven (see above, paragraph 3.1) has a winter-program of general lectures and an intensive summer-course on Indian literature, philosophy, etc. It also occasionally organizes exhibitions on Indian art, manuscript fragments and old books.

Virtually every university has its occasional public lectures by Indian guest-speakers or by other foreign orientalists.

In 1966, the University of Ghent organized an exhibition on Sanskrit in Europe, with special reference to Dutch Belgium and Holland.

Sanskrit language and literature are from time to time referred to in the radio- and TV- programs for secondary schools.

Sanskrit plays, in translation, are exceptionally brought to the Belgian stage. e.g. Kālidāsa's Śakuntala was staged in Dutch at the "9th International Theatre Festival" in Antwerp in 1967.

4. Conferences and Seminars on Indology

The "Days of the Belgian Orientalists" are taking place every year in the month of May in Brussels. This conference lasts for three or four days and includes a section on India and its literatures.

The "First Conference on Early Devotional Literature in New Indo-Aryan Languages" was held in the Department of Oriental Studies, University of Leuven, in April 1979. The Proceedings were published in the series "Orientalia Lovaniensia Analecta", Volume 8, in 1980.

The "Seventh International Conference of South Asian Archaeologists in Western Europe" took place in Brussels (Royal Musea) from 4 till 8 July 1983.

For the public lectures series in the Universities and for the summer-course of Inforeint (Leuven), see the above paragraph 3.2

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Belgium

Sanskrit Studies in Austria

By G. Oberhammer

Published in Sanskrit Studies outside India. News Bulletin No.2 of the International Association of Sanskrit Studies Part I, Weimar 1979.

1. Indology in Austria: (Österreich)

Indology has been established in Austria about 100 years ago by George Buhler who also founded the Institute of Oriental Studies at the Vienna University, from which in 1955 the Institute of Indology emerged as an independent Institute of the University. At the beginning of this century Indology has been taught also in the Universities of Innsbruck, Graz and Prague-(Czechoslovakia)

The present tradition of Indology is mainly indebted to Prof. Frauwallner whose main concern was the history of Indian Philosophy on the basis of the historical and philological methods. Prof. Frauwallner's research included both the Hindu and the Buddhist systems. At present, research on the Hindu system is being continued by Prof. Oberhammer and his staff in the Institute of Indology, while Prof. Steinkellner has taken over the Buddhist systems in his Institute of Tibetan and Buddhist studies which was established in 1973.

One of the projects started by Prof. Oberhammer is a collection of material for the history of the Visistadvaita school, of which the first volume will appear in 1978-79. Dr. Krick is working at a project of studying and editing Rcakas of the Katha school, Dr. R. Mesquita is preparing a critical edition and study of the works of Yamunamuni. A project is being undertaken in the Institute of Tibetan and Buddhist Studies by Prof. Steinkellner, is the study of Buddhist epistemology and logic, and studies on the Madhyamaka school. Besides, Prof. Frauwallner's posthumous writings and notes are in the process of being prepared for publication (Oberhammer Steinkellner).

Besides these two Institutes, Vienna University has also an Institute of Linguistics with a Department of Indo-European Studies. Prof. Mayrhofer who is the Chairman has almost concluded the project of an Etymological Dictionary of Old Indian, and another project being presently carried out is a Reverse Index of Old Indian.

Outside Vienna there are no Institutes of Indology, but Sanskrit is taught in various other Universities as a language within Indo-European and Comparative Linguistics (e.g. Innsbruck, Salzburg, Graz). A project of the Austrian Academy of Sciences (Commission for the Languages and Cultures of South Asia) is an exhaustive Handbook of the history of Indian Philosophy on historical-philological principles.

2. Names of Institutions:

Institut für Indologie der Universität Wien
Institut für Tibetologie und Buddhismuskunde der Universität Wien
Institut für Sprachwissenschaft (Indogermanistik) der Universität Wien
Kommission für Sprachen und Kulturen Sudasiens, Österreichische Akademie der Wissenschaften

2.4. Österreichische Nationalbibliothek, Wien
Universitätsbibliothek Wien.

2.5. Handschriftensammlung der Österreichischen Nationalbibliothek

3. Journals:

Wiener Zeitschrift für die Kunde Sudasiens
Wiener Zeitschrift für die Kunde des Morgenlandes (uptil 1956)
Die Sprache

4. Symposium on the concept of revelation in Indian religions, held in 1973,
Symposium on transcendental experience and salvation in Indian systems, held in 1977, both at the Institute of Indology (Vienna)

5. Publications since 1972:

5.1. T. Vetter: Sarvajnatman's Samkseparirakam. 1. Kapitel. Einführung, Übersetzung und Anmerkungen, Sitzungsberichte 282. Band. 3. Abh., Wien 1972. 176 p.

E. Steinkellner: Dharmakirti's Pramanaviniscayah. Zweites Kapitel: Svarthanumanam, Teil 1: Tibetischer Text und Sanskrittexte. Sitzungsberichte, 287. Band, 4. Abh., Wien 1973.

Vasudevasrama Yatidharma prakasa. Treatise on World Renunciation, critically edited with introduction, annotated translation and appendices by Patrick Olivelle. Part 1: Text. Wien 1976.

Part two: Translation 1977.

5.2.2. G. Champarthy: An Indian Rational Theology, Introduction to Udayana's Nyayakusumanjali, Wien 1972.

G. Oberhammer (ed.): Offenbarung, geistige Realität des Menschen, Arbeitsdokumentation eines Symposiums zum Offenbarungsbegriff in Indien, Wien 1974.

G. Oberhammer: Strukturen yogischer Meditation. Untersuchungen zur Spiritualität des Yoga. Sitzungsberichte, 322. Band, Wien 1977.

G. Oberhammer (ed.), Transzendenz erfahrung Vollzughorizont des Heils. Das Problem in indischer und christlicher Tradition. Arbeitsdokumentation eines Symposiums, Wien 1978.

E. Steinkellner: Verse-Index of Dharmakirti's works (Tibetan Versions), Wiener Studien zur Tibetologie und Buddhismuskunde Band I, Wien 1977.

L. Dargyay: Die Legende von den sieben Prinzessinnen (Saptakumarika-Avadana), Wiener Studien Band II, Wien 1978.

5.2.3. M. Mayrhofer, Kurzgefaßtes etymologisches Wörterbuch des Altindischen. A concise Etymological Sanskrit Dictionary (1956-78).

W. Schwarz, O.E. Pfeiffer: Rückläufiges Wörterbuch des Altindischen. Reverse Index of Old Indian (1974 ff.).

5.2.7. L. Wanke, Zentralindische Felsbilder, Graz 1977.

Published in Sanskrit Studies, outside India 1979-1981, International Association of Sanskrit Studies, 5th world Sanskrit Conference, Varanasi 1981, Delhi 1981.

Since the last Report on the Sanskrit Studies in Austria (in: Sanskrit Studies outside India, News Bulletin Report No.2 of the International Association of Sanskrit Studies, Part I, Weimar 1979) there has been no substantial change in the Sanskrit Studies in Austria. The research projects mentioned therein have been continued. In the Indological Institute of Vienna, Prof. Oberhammer published within the scope of his Collection of Materials for the History of the Visistadvaita-School the first Volume: Parasarabhatta's Tattvaratnakarah, while his second Volume of this collection: Nathamuni's Nyayatattvam is in preparation. Another major project in initial phase-conducted by Prof. Oberhammer is the working out of a Dictionary of Indian Epistemology and Logic.

The volume of E. Frauwallner's Kleine Schriften is being prepared by Prof. Oberhammer and Prof. Steinkellner; it will be included in the Series of Glanapp-Stiftung. This series will bring out also his Nachgelassene Schriften, of which the first Volume is nearly ready for publication.

The Institute of Tibetan and Buddhist Studies in Vienna under Prof. Steinkellner has continued the research in the Study of Buddhist Epistemology and Logic and Studies on the Madhyamaka School. Within these projects two dissertations have been completed. Dr. Gudrun Buhmann, Der Allwissende Buddha. Ein Beweis und seine Probleme. Ratnakirtis Sarvajnasiddhi, 1980; Dr. Helmut Tauscher: Candrakirti's Madhyamakavataharah und Madhyamakavataharabhasyam (Cap. VI, vers 166-226). Übersetzt und kommentiert.

Outside Vienna, Prof. Schwarz (Institute of Classical Philology of the University of Graz) is doing research into-Greek-India and Roman-Indian Relations from Alexander the Great up to the 6th and the 7th century A.D.

Apart from the yearly Journals of Sanskrit Institutions in Vienna, Wiener Zeitschrift für die Kunde Sudasiens edited by G. Oberhammer and Die Sprache edited by W. Dressler and M. Mayrhofer, the

No.2), the following publications came out during the period 1979-1981:

1. Publications of the Institute of Indology of Vienna.

Tilman Vetter: Studien zur Lehre und Entwicklung Sankaras, Wien 1979, Publications of the De Nobili Research Library 6.

Francis X. D'Sa: Sabdapramanyam in Sabara and Kumarila. Towards a Study of the Mimamsa Experience of Language, Vienna 1980, Publications of the De Nobili Research Library 7.

Gerhard Oberhammer/Hans Waldenfels: Überlieferungsstruktur und Offenbarung. Aufriss einer Reflexion des Phänomens im Hinduismus mit theologischen Anmerkungen. Wien 1980, Occasional Papers I, Publications of the De Nobili Research Library.

In Press:

Richard F. Young: The Matapariksa Controversy: A Case Study in Hindu Apologetics based upon early Nineteenth-Century Sanskrit Treatise directed against Christianity. Vienna 1981, Publications of the De Nobili Research Library 8.

2. Publications of the Institute of Tibetan and Buddhist Studies:

Piotr Klafkowski: The Secret Deliverance of the Sixth Dalai Lama, as narrated by Dharmatala. Vienna 1979, Wiener Studien zur Tibetologie und Buddhismuskunde, Heft 3.

Gudrun Buhmann: Der Allwissende Buddha. Ein Beweis und seine Probleme. Ratnakirtis Sarvajnasiddhi, Übersetzt und kommentiert. Wien 1980, Wiener Studien zur Tibetologie und Buddhismuskunde, Heft 4.

Helmut Tauscher: Candrakirti's Madhyamakavataharah und Madhyamakavataharabhasyam (Cap. VI, Vers 166-226), Übersetzt und kommentiert. Wien 1981, Wiener Studien zur Tibetologie und Buddhismuskunde, Heft 5.

Ernst Steinkellner: Der Eintritt in das Leben zur Erleuchtung, Diederichs Gelbe Reihe 1981.

3. Publications of the Oesterreichische Akademie der Wissenschaften:

Gerhard Oberhammer: Materialien zur Geschichte der Ramanuja-Schule. I. Parasarabhattas Tattvaratnakarah. Wien 1979, Veröffentlichungen der Kommission für Sprachen und Kulturen Sudasiens, Heft 14: Sitzungsberichte, 346. Band.

Ernst Steinkellner: Dharmakirti's Pramanaviniśaya, Teil II: Übersetzung und Anmerkungen. Wien 1979, Veröffentlichungen der Kommission für Sprachen und Kulturen Sudasiens, Heft 15: Sitzungsberichte. 358. Band.

Hertha Krick: Das Ritual der Feuergründung. Darstellung und Interpretation. Herausgegeben von G. Oberhammer Veröffentlichungen der Kommission für Sprachen und Kulturen Sudasiens, Heft 16 to be published in 1981.

Question Box

Answer to Question (Vol.4 No.1)

WAS DENTISTRY KNOWN AS A SCIENCE IN ANCIENT INDIA ?

The subject of dentistry in ancient India has attracted the attention of two eminent fellow workers. The illuminating papers of Dr. N.N. Bery of New Delhi and the late Dr. J.J. Modi of Bombay were published in 1929 and 1931 respectively in the Indian Dental Journal. In spite of the brilliant and strenuous efforts of the writers their work was unfortunately related to undeserved oblivion except a few lines of Dr. Modi's paper which survive in the book of Mrs. Lilian Lindsay.

It will perhaps be surprising to the readers to learn that the ancient Hindu doctors were acquainted with human anatomy; as it is generally believed that the dissection of human bodies for the purpose of studying anatomical structure was not known in ancient India. The anatomy in its primitive form had its origin in the Vedic age, where we come across terms like heart, liver, brain, stomach, lungs, uterus, intestines and other organs.

Sushruta was the first surgeon, who was convinced that the dissection of a dead body was of paramount importance for a successful operator in surgery. The practical method of operations presupposed a sound and accurate knowledge of anatomy. He has remarked that an unskilful surgeon is a great danger to the public, for "theory without practice is like a one winged bird incapable of flight".

Dr. Wise in his Hindu system of medicine says "The Hindu philosophers undoubtedly deserve the credit of having (though opposed by strong prejudice) entertained sound and philosophical views respecting the uses of the dead to the living, and they were the first scientific and successful cultivators of the important and essential of all the departments of medical knowledge-practical anatomy".

With reference to dissections, Sushruta says "It is necessary to secure a dead body of a person whose age does not exceed 100 years, whose limbs are sound, and who at the same time has not died of a chronic disease or of poisoning". After cleaning the intestines of the corpse from a faecal matter, it should be carefully covered with Munja grass, Kusa grass or the bark of the trees. Then the dead body should be inserted in a closed cage (so that it may not be eaten away or destroyed by aquatic animals.) It may be placed in a lonely place in the silent water of the river and it should be allowed to decompose for one week. Then the body may be taken out and it should be lightly brushed with grass roots, and Kusa blade, or a strip of bamboo may be used for complete examination of the structures of the decomposed body. One who has observed and studied the deeper structures and organs of the body and who has thus become expert in the subject is alone considered confident of his knowledge is alone considered

qualified and competent to practise the science of life and the art of healing. Thus a careful scrutiny was made of the eyes and every part and sub-division of the external and internal structures and different organs described in Sastras and the authoritative books were thoroughly studied.

THE MOUTH HYGIENE

It is an old and general belief that the Indians have beautiful and strong teeth. The laws of Manu enforced a strict code of hygiene which includes compulsory ablution. The Hindus have a high concept of hygiene. They will not take anything in the morning without cleaning their teeth and washing the mouth. There was a strict code of oral hygiene, which was based on religious sanction. The mouth being the gateway of the human body through which all the food and drink passed, it was kept scrupulously clean. Early in the morning, the brushing of the teeth was done with the twig of a tree, and this practice is transmitted to us from father to son from time memorial. The twig is popularly known as "Datana" or the Indian tooth brush. It was either of a babool, (astringent) neem (bitter) or banyan (sweet) tree. The twig is about eight inches in length, and in circumference equal to that of the little finger. A green twig is crushed and chewed at the proximal end till it becomes soft like a painting brush, so that it may not cause any injury to the gums. All the surfaces of the teeth were cleaned up and down slowly and gradually for about twenty to thirty minutes. Then the "Datana" (twig) is split up from the chewed end and is divided in two separate parts. One then half broken and bent in an inverted V shape is used as a tongue scraper. The chewing of the twig gives an exercise to the jaws and juice extracted from it tones up the gums. Charaka says "The tooth twig should be used twice a day. Teeth cleaning dispels oral fetor and dysgenasia, removes the impurities of the tongue and the teeth and the mouth, and promptly induces appetite. Twigs culled from Indian beech, Indian oleander Mudar, Arabian jasmine Arjuna, Spinous Kino tree and such other trees are recommended for use in teeth cleaning. The tongue scraper should be without a sharp edge, curved and made of gold, silver, copper, tin or brass. The coating which accumulates at the root of the tongue and obstructs respiratory passages is the cause of fetor oris, therefore the tongue should be properly scrapped. One desirous of cleanliness, relish and fragrance of breath, should keep in the mouth nutmeg, musk mallow, betel nut, cloves, cubeb pepper, good betel leaves, camphor and small cardamom.

The use of oil gargles imparts strength to the jaws, voice, and excellent plumpness to the face, fine sensitiveness to the palate and a keen appetite. One using these gargles does not suffer from the dryness of the throat nor from the fear of the lips getting chapped. One's teeth do not become carious, but remain firmly rooted, they do not ache nor are they set on the edge by acidity because they are able to chew even the hardest of eatables."

Even to day we find some Indians having very strong and healthy teeth, which can chew hard eatables like sugar canes and crack nuts without any injury. Sushruta recommended the following classes of trees. The twigs of Khadira (*Acacia Catechu*), Madhuka (*Bassia Latifolia*), Nimva (*Melis Azadirachata*) and Karanja (*Pongami Glabra*) are the best for using as "Datana". He also advises the use of some tooth powder. Bhav-misra (1550) in his publication on clinical medicine called Bhavprakash (Gujarati 1905) describes in details in an interesting manner the names of the twigs for the use of "Datana" with various advantages. The author strongly contra-indicates the use of certain twigs because of their ill effects. He also mentions the beneficial effects of the medicated gargles (Gundusha) in the diseases of the mouth, and washing the face with cold and lukewarm water. He also deals with medicated smoking as Charaka has done.

The use of the tooth brush is contra-indicated in various diseases of the mouth.

Herz Imbar says "Because orientals believe that most ailments are due to bad teeth, they pay more attention to those precious stones. During my wandering in the orient, I was struck with the fact that those people are seldom troubled with tooth ache. In the aged you notice the splendid array of white teeth all in a line like soldiers. Indeed every poet in the orient marks the beauty of his beloved lady in the emblem of white pearly teeth of which her ladyship is justly proud."

Dr. R. Ahmed says "The use of the twigs as a tooth brush is as old as the Himalyas". Indian women also use the bark of the walnut tree to whiten the teeth and to beautify the vermilion border of the lips.

The tooth powder that was used was made of burnt almond shells or ordinary wood charcoal in eight parts, and one part of Sindhava (rock salt). This powder was either taken on the "Datana" or it was rubbed on teeth with the finger. In the common practice for massaging the gums, which is still current, purified castor oil is used to which is added a small amount of powdered rocksalt and camphor. Then the mixture is boiled for a few minutes and cooled. This is used for massaging the gums. It has a stimulating effect on the gums and refreshes the mouth.

I' Tsing in the records of the Buddhistic religion says "Every morning one must chew tooth wood (Danta Kastha) and clean the teeth and rub off dirt of the tongue, as carefully as possible. Only after the hands have been washed and the mouth cleaned is a man fit to offer salutation, if not both the saluter and the saluted are at faults. He further says "If one unavoidably comes near a superior while chewing the wood, one should cover the mouth with the left hand. Be careful to chew fully and polish the teeth and let all the mouth water come out and then to rinse abundantly with water. Take in the water from the nose once. This is the means of securing long life as directed by Buddhista Naga Arjuna".

After the meals, the mouth is thoroughly cleaned by gargling with water. The toothpicks advocated by Sushruta are still commonly used

in our country, after the meals to remove the food particles lodged in the inter dental spaces. He says "Otherwise these will decompose and the mouth would stink badly". After the food a "Pan" (betel leaf) was chewed, the practice of Pan eating still continues even at present. The Pan is astringent, exhilarant, carminative, stimulant, and full of aroma. It contains different ingredients which are mixed up proportionately with the betel leaf. They are lime, catechu, finely cut betel nut, clove, nutmeg, cardamom and other tasty spices. The pan is not to be swallowed like a morsel of food, but it is to be chewed slowly and gradually at ease. This chewing helps in automatic cleaning of the teeth, makes the teeth resistant against caries, which agrees with modern saying "A clean tooth never decays".

Carren says "Poor as well as rich spend two hours every morning in rubbing their teeth with a small stick". Dr. Johns of Darjeeling observes "I am to note as a result of my experiments and observations among primitive races in India, that they are in possession of excellent teeth and healthy mouths and that they achieved this without our present knowledge of prophylactics and our in sanitary use of the tooth brush". Dr. N.N. Bery states "A more careful examination of these ideas would lead to convictions that much which is new is not true, and that which is true is not new. If we pass to the care of the mouth, we can convince ourselves that we are only imitators. We are obliged to recognise that these methods were employed not in empiric manner as one would believe, but with a science gleaned from observations".

Thus we here observe that the high standard of the hygiene of the Hindus, which was inculcated upon them by religious preachers at the dawn of civilisation, is still being observed in our country. The sanitary, and hygienic condition of the mouth played an important role of oral health in protecting the body against the ravages of focal infection. The evil effects of unclean and infected dental conditions, associated with the systematic disturbances, have been sufficiently brought to the notice of the civilised world. This knowledge is derived from our ancient Hindu literature of Ayurveda. America came to know this only in the year 1910, when Sir William Hunter revealed oral sepsis. This was known to the Hindu doctors of great antiquity. 65 diseases of the mouth were tabulated in those days out of which 19 were said to be incurable. Their description in Sanskrit is as follows:-

मुखरोगः पञ्चषष्टिः सप्तस्थानेषु ।
तत्रायतनान्योष्यै दन्तमूलानि दन्ता जिह्वा ।
तालु कण्ठः सर्वाणि चेति । तत्राष्टवोष्योः ।
पञ्चदश दन्तमूलेषु । अष्टौ दन्तेषु । पञ्च
जिह्वायाम् । नवतालुनि । सप्तदश कण्ठे ।
त्रयः सर्वेष्वायतनेषु ॥

GENERAL CLASSIFICATIONS

Sixty five diseases of the mouth are known and are found to attack seven different localities viz. the lips, the gums, the

teeth, tongue, palate, throat and the entire cavity. Of these 8 are peculiar to the lips, 15 of the roots of the teeth, 8 of the teeth, 5 of the tongue, 9 of the palate, 17 of the throat and 3 general.

DISEASES OF THE LIPS

The eight forms of disease which affect the lips are either Vataja, Pittaja, Kaphaja, Sannipatika, Raktaja, Mansaja, Medaja or Abhigataja (traumatic). The Vataja type:- The lips become dry, rough, numbed, black, extremely painful and the affected part seems as if it has been smashed and pulled out or cracked by the action of the aggravated Vayu. In the Pittaja type the lips become blue or yellow coloured and studded with (a large number of small) mustard like eruptions, which suppurate and exude a purulent discharge attended with a burning local sensation. In Kaphaja type the affected lips are covered with small eruptions, which are of the same colour of the surrounding part and become slimy, heavy or thick, cold and swollen. Pain is absent in this type and the patient feels an irresistible inclination to scratch the part. In the Sannipataja type the lips change colour, becoming black, yellow or ash coloured (white) at intervals and are found to be studded with various sorts of eruptions. In the Raktaja type (produced by the vitiated condition of the blood) the affected lips look as red as blood and profusely bleed and chocolate coloured eruptions appear on their surface. In Mansaja type (due to the vitiated local flesh) the lips become heavy, thick and gathered up in the form of a lump of flesh. The angles of the mouth become infected with parasites, which germinate and spread themselves in the affected parts. In Medaja type (fat originated) the lips become numbed, soft, heavy and marked by an itching sensation. The skin of the inflamed lips becomes glossy, and look like the surface layer of clarified butter, exuding a thin crystal like (transparent) watery discharge. In the Abhigataja (traumatic) type, the lips become red, knotty, and marked by an itching sensation, and seem as if pierced or cut open with an axe and become cracked and fissured.

DISEASES OF THE ROOTS OF THE TEETH

Diseases which are peculiar to the roots of the teeth are known as Sitada, Danta Pupputaka, Danta Veshtaka, Saushira, Maha Saushira, Paridara, Upakusa, Danta Vaidarbha Vardhana, Adhimansa, and the five sorts of Nadi (Sinus).

In Sitada (Scurvy) the gum of the teeth suddenly bleed and become putrified, black, slimy, and emit a fetid smell. They become soft and gradually slough off. The disease has its origin in the deranged condition of the local blood and Kapham. Danta Pupputaka (Gum boil). The disease in which the roots of two or three teeth at a time are marked by a violent swelling and pain is called Danta Pupputaka. It is due to the vitiated condition of blood and Kapham. Danta Veshtaka. The teeth become loose in the gums which exude discharge of blood and pus. This disease is due to the vitiated blood of the locality. Saushira. The disease in which itching and painful swelling appears about the gums attended with copious flow of saliva is called Saushira (alveolar abscess). It is caused by the deranged blood and Kapham of the locality. Maha Saushira. The disease in

which the teeth become loose, the palate marked by sinuses or fissures, the gums putrified and the whole cavity of the mouth inflamed is called Maha Saushira, the outcome of concerted action of the deranged "Doshas" of the body. Paridara. The disease in which gums become putrified, worn off and bleed, is called Paridara (bleeding gums). The disease has its origin in the deranged condition of the blood, Kapham and Pittam. Upakusa. The disease in which the gums become marked by a burning sensation and suppuration and the teeth become loose and shaky (in their gums) in consequence and bleed at the least shaking is called Upakusa. There is a slight pain and the entire cavity of the mouth becomes swollen and emits a fetid smell. This disease is due to the vitiated condition of the blood and Pittam. Danta Vaidarbha. The disease which is a consequence of the friction of the gums marked by the appearance of a violent swelling about the portion so rubbed and in which the teeth become loose and can be moved about is called Danta Vaidarbha. It is due to an extraneous cause such as a blow etc. Vardhana. The disease which is marked by the advent of an additional tooth (wisdom molar) through the action of the deranged Vayu with a specific excruciating pain of its own, is called Vardhana or the eruption of the wisdom tooth. The pain subsides with the cutting of the tooth. Adhimansa. The disease in which violent and an extremely painful tumor appears about the root of the tooth and is situated in the farthest end of the cavity of the cheek bone, accompanied by a copious flow of saliva, is called Adhimansa or epulis. It is due to the deranged Kapham and five sorts of Nadi (Sinus) which affect the roots of the teeth (are either Vataja, Pittaja, Kaphaja, Sannipataja or Abhigataja), their symptoms being respectively identical with those of the type of Nadi Vrana.

DISEASE OF THE TEETH PROPER

Diseases which are restricted to the teeth are named as Dalana, Krimi Dantaka, Danta Harsha, Bhanjaka, Sarkara, Kapalika, Syav Dantaka and Hanu Moksha.

Dalana is the disease in which the teeth seem as if cleft as under with violent pain called Dalana or tooth ache, the origin of which is ascribed to the action of the aggravated state of the bodily Vayu.

Krimi Dantaka: The disease in which teeth are eaten up by worms is called caries. The teeth become loose and perforated by black holes accompanied by a copious flow of saliva. The appearance of an extremely diffused swelling about the roots of the decayed teeth, with a sudden aggravation of the accompanying pain without any apparent cause is also one of its specific features.

Danta Harsha: The disease in which the teeth cannot bear the heat, cold or touch is called Danta Harsha. It is due to the deranged condition of Vayu.

Bhanjaka: The disease in which the face is distorted, the teeth break and the accompanying pain is severe is called Bhanjaka (degeneration of the teeth). The disease is due to the deranged condition of Vayu and Kapham.

Sarkara: The disease in which sores formed on the teeth and hardened (by the action of deranged Vayu) lie in a crystallised form at the necks of the teeth is called Sarka (Tartar). Such deposits tend to destroy healthy growth and functions of the teeth.

Kapalika: The disease in which the preceding crystallised deposits get cemented together and afterwards separate from the teeth taking away a part of their coating is called Kapalika (calcareous deposits), which naturally makes an erosion in the teeth.

Syava Dantaka: The disease in which the teeth variously scorched by the action of the deranged Pittam assume a blackish or blue colour is called Syava Dantaka (Black teeth).

Hanu Moksha: The disease in which the aggravated Vayu (by such causes as loud talking, chewing of hard substances or immoderate yawning) produces the dislocation of the jaw bones is called Hanu Moksha. It is identical with Ardditam as regards its symptoms.

DISEASES OF THE TONGUE

The five kinds of the diseases which affect the organ of the taste are three sorts of Kantakas due to three deranged Doshas (Vataja, Pittaja and Kaphaja), Alasa and Up-Jihvika. The Kantakas-In the Vataja Kantaka type the tongue becomes cracked, loses the sense of taste and becomes rough like a teak leaf. (giving the organ a warty appearance). In the Pittaja Kantaka, the tongue is coloured yellow and studded over with furred blood coloured papillae with the burning sensation (of Pittam in it). In Kaphaja Kantaka, the tongue becomes heavy, thick and over grown with vegetation of slender fleshy warts in the shape of Salmali thorns.

Alasa: The severe inflammatory swelling, about the under surface of the tongue is called Alasa, which if allowed to grow on unchecked, gives rise to numbness and immobility of the organ and tends to a process of rapid suppuration at its base. The disease is caused by deranged blood and Kapham.

Up -Jihva : The disease in which a (cystic) swelling shaped like the tip of the tongue appears about the under surface of that organ by raising it a little is called Up-Jihvika (Ranula). The accompanying symptoms are salivation, burning and itching sensation in the affected organ. These are due to deranged Kapham and blood (of the locality).

DISEASES OF THE PALATE

The diseases which are peculiar to the part of the palate are named Gala Sundika, Tundikeri, Adhrusha, Mansa Kachhapa, Arvuda, Mansa sanghata, Talu pupputaka, Talu Shosha, Talu paka.

Gala Sundika: The diffused elongated swelling caused by deranged blood and Kapham, which first appears about the root of the palate and goes on extending till it looks like an inflated skin bladder is called Gala Sundika (tonsillitis) by physicians.

Thirst, cough, difficult breathing are the indications of the disease. **Tundikeri:** A thick swelling resembling the shape of the fruit of Tundikeri plant appears at the root of the palate attended with a burning or pricking pain and suppuration is called Tundikeri (abcess of the tonsil).

Adhrusha: a red numbed swelling appearing about the same region as the effect of the vitiated blood of the locality, attended with severe fever and pain is known as Adhrusha.

Mansa Kachhapa: A brownish and slightly painful swelling somewhat like the back of a tortoise (and appearing in the region of the soft palate) is called Mansa Kachhapa. The disease is slow in its growth or development and it is due to the deranged Kapham.

Arvuda: A swelling shaped like the petal of a lotus lily and appearing in the region of the soft palate as an outcome of the aggravated condition of the local blood is Arvudam. The swelling is identical with Rakataruda.

Mansa Sanghata: A vegetation of morbid flesh at the edge or extremity of the soft palate through the action of deranged Kapham is called Mansa Sanghata. It is painless.

Talu pupputaka: A painless permanent swelling to the shape of Kola fruit (plum) caused by deranged fat and Kapham at the region of the soft palate is called Talu pupputaka.

Talu Sosha: The disease of the soft palate in which the patient feels a sort of parched sensation with dyspnoea and a severe piercing pain in the affected part is called Talu Sosha. It has its origin in the aggravated condition of the bodily Vayu acting in concert with deranged Pittam.

Talu paka: The disease in which the deranged Pittam sets up a very severe suppurative process in the soft palate is called Talu paka.

TREATMENT OF DANTA-VESHTA ETC.

In case of Danta-Veshta the swelling should be first bled and then rubbed with a pulverised compound of Rodhra, Pattanga, Yashti-Madhu and Laksha mixed with profuse quantity of honey. A decoction of the bark of Kishiri trees mixed with sugar, honey and clarified butter (as an after-throw) should be used as gargles. Clarified butter cooked with the drugs of Kakolyadi group with ten times its own weight of milk should be used as snuff. In case of Saushira the affected part after being bled should be plastered with Lodhara, Musta, Rasanjana pounded together and mixed with honey. A decoction of Kishiri trees should be used as gargles, and clarified butter cooked with the paste compound of Sariva, Utpala, Savra, Aguru, Chandanna and ten times of its weight of milk should be recommended as an errhine.

TREATMENT OF DANTA-VAIDARBHA ETC.

In case of Danta Vaidarbha, the regions about the roots of the teeth should be cleaned by opening them with an instrument and subsequently treated with alkaline applications, cooling measures should also be resorted to during the treatment of the disease. In

case of any Adhika-Danta (wisdon-tooth) the tooth should be uprooted and removed and if there is bleeding, it should be cauterised by fire and then an experienced physician should apply the remedies under the head of worm-eaten teeth.

TREATMENT OF ADHIMANSA

In case of Adhimansa, the additional fleshy growth about the roots of the teeth should be surgically removed and treated with a compound of Vacha, Tajovati, Sarjika, Patha, and Yava-Kshara, pasted together with honey or powdered Pippali, mixed with honey should be used as gargles, and a decoction of Patola, Triphla, and Nimba for washing the affected part. Errhines and inhalation of Virechana smoke that leads to the secretion of mucous from the head would likewise prove efficacious in such cases.

TREATMENT OF DANTA NADI

In case of Danta Nadi the treatment of Nadi (Sinus) about the teeth is identical with that of sinus in general. The specific remedial measure, however is that the gum of the affected tooth should be incised and the tooth should be extracted if it be not in the upper jaw. The affected part should be purified and cauterised with an alkali or fire. Hence in a case of sinus a complete extraction of any fragments of broken bone or tooth is absolutely necessary for complete cure, otherwise if left unextracted the sinus would run below the jaw. If the affected tooth lie in the upper jaw and if is very firm though attended with a toothache should not be extracted, as it might produce an excessive hemorrhage from its roots and usher in blindness, facial paralysis or other dangerous affections such as convulsions etc. due to excessive loss of blood. A decoction of Jati, Madana, Svadu-Kantaka and Khadira should be used as a mout wash, and oil cooked Jati, Madana, Katuka, Svadu-Kantaka, Yasti-Madhu, Rodhra, Manjishtha and Khadira should be used to clean the sinus and heal a sinus invading the roots of a tooth. The remedial measures to be employed in the diseases affecting the roots of the teeth have thus been described above.

We shall now proceed to describe the medical treatment to be employed in the diseases which confine themselves exclusively to the teeth.

TREATMENT OF THE DISEASES OF THE TEETH PROPER

A case of Danta Harsha yields to the use of any Sneha or the Trivrita-ghrita or the decoction of Vayu subduing drugs like gargles. An application of Snaihika Dhuma (emulsive fumes) and the use of snuff (Nasya), emulsive articles of food, meat soups, gruel, prepared with meat (Rasa-Yavagu), milk cream, (milk) clarified butter Siro-Vasti and other Vayu subduing measures generally prove efficacious. In a case of Danta-Sarkara (Tartar, calcareous deposits on teeth) the deposit should be carefully removed without injuring the tooth, after which the part should be dusted (Pratisarana) with powdered Laksha with honey. All the remedies mentioned in connection with the treatment of Danta-Harsha may also be employed in this disease.

TREATMENT OF KAPALIKA ETC.

These remedies are also efficacious in a case of Kapalika, which is extremely hard to cure. In case of

Krimindanta (caries) found to be firm and unloosed in the socket, the affected tooth should be fomented and the accumulation of pus, blood etc. should be removed. It should then be treated with the same Vayu subduing errhines of the Ava-pida form and with emollient gargles as well as with plasters prepared with Varsha-Bhu and the drugs of the Bhadra-dravidi group and with a diet of emulsive articles of food. In case however where the tooth is loose, it should be removed and the cavity cauterised with fire or an alkali. An oil cooked with the paste of Vidari, Yasti-Madhu, Sringataka and Kaseruka and with ten times its own weight of milk should be administered as an errhine. The course of treatment in a case of Hanu-Moksha will be described later on. A person suffering from any affections of the teeth should refrain from taking acid fruits, cold water, dry food and brushing his teeth with a twig. The treatment of curable types of dental diseases has been described above, and we shall now proceed to describe the treatment for incurable types of tongue diseases.

The old Hindu doctors were acquainted with the process of operations of dental extractions. The preceptor used to teach the students methods of removal of the teeth by practical experiments on dead bodies of animals. The art of operation, excision and the method of cutting in upward or downward direction was demonstrated by an incision made on leather bage filled with water, bottle gourds, water melon, and such other things. Extractions were performed with forceps and elevators. A glance at the ancient dental instruments will give an idea of the type of instruments used in those days. Sushruta advised the removal of a lower wisdom molar and then the application of cautery in the socket.

उद्धृत्याधिकदन्तं नु ततोऽभिभवचारयेत् ।
कुमिदन्तकवच्यापि विधिः कार्यो विज्ञानता ।

He has distinctly stated that an upper molar, if it is very firm, should not be extracted, because complications arising from it are likely to impair vision of the patient. Even to-day there is a general belief among the Indian patients that the extraction of a very strong upper molar is likely to do harm to the eye-sight. This we learn from the following passage.

उद्धृते वृत्तरे दन्ते शोणितं प्रसवेदिति ॥
रक्तनियोगादूर्ध्वोक्तरीगा घोरं भवन्ति हि ।
काणः सञ्जायते जन्तुर्दन्ति चास्य जायते ॥

Of course we will not agree with this with our present knowledge. In the opinion of Sushruta however learned a student may be in book-lore, he cannot be considered fit and competent for the practice of surgery, unless he has acquired the art of practical training. In the treatment of a sinus he has advised the removal of a carious tooth in the lower jaw; unless the tooth is completely removed and the affected part is cauterised, the sinus will never heal up. The operations in the mouths were performed when the patient had an empty stomach. The sick room was fumigated with the vapours of white mustard, bdellium, Nimiva leaves and resinous gums (Dhupa) of Shala trees and other things.

The use of anaesthetics was also known to Indian surgeons during the operations. They knew the anaesthetic called "Sammohini". Inhalations of the fumes of burning hemp was the anaesthetic used for dental operations at a remote antiquity. The operation

was carried out painlessly. charaka and Sushruta also advise us the use of wine to produce insensibility to pain.

प्राक्कृतकर्मणश्चेत् भोजयेदातुं भिषक् ।
मद्यं पाययेन्मद्यं नीक्ष्यो योऽवेदनासहः ॥
न सूक्ष्मत्यक्तसंयोगान्मत्तः अस्त्रं न बुध्यते ।
तस्मादवस्थं मोक्तव्यं रेनेषूक्तेषु कर्मणि ॥
प्राणोद्वाह्यन्तरो नृणां बाल्यप्राणगुणान्वितः ।
श्वाससन्निरेधेन उत्तरं पंचमौक्तिकम् ॥

In an accidental injury if the tooth of a young patient becomes loose, but not fractured, it should be plastered with a cooling paste on the outside, after completely removing the blood that has coagulated at the root. It should be sprayed or washed with cold water and should be treated with drugs having Sandhaniya (adhesive) properties like honey, clarified butter and medicaments of Nyagrodhadi group. The patient should be strictly instructed to take liquid diet like milk with the help of a lotus stem thus giving the tooth the necessary rest. Thus there is a fair chance for the tooth to become firmly fixed again, the tooth of an old patient should be extracted.

INDIAN DENTAL ART AND LEGENDS

The Hindus were conversant with the art of dental prosthesis. It has been stated in Elphinston's history of India that Jay Chandra Rathod, the king of Conouj whose dead body was recognised by artificial teeth when he was killed in a battle with Shahabudin in 1194 A. D. 1. Very illuminating and interesting information on the dental art of antiquity in India has been mentioned by Dr. N. N. Berry 2. which we shall read in the following lines.

"Prosthetic dentistry was known to the Indians ages before, it was practised in a solid block of ivory obtained from the sea horse, elephant's tusks and carved to represent the missing teeth, some of which we admit were exceptional works of art. Then again natural teeth were used taken from corpses or even living men and mounted on gold, silver, ivory or boxwood. Measurements were taken by means of a compass of these parts of the jaw for which artificial teeth were required. The teeth were carved in occlusion (from ivory) and then the two pieces separated by a saw. The gums were painted with pigment, and the fit was effected by carving and scooping out the marked places. Ingenious individuals fashioned rude teeth to supply deficiencies in their own mouths out of mother of pearl, quartz and sea shells. In using human teeth on artificial plates, they were cut off at the crowns, the canals cleaned out and enlarged to receive the pin which was riveted to the under side of the bone or gold plate. For gold plates, impressions were taken in wax and casts made. The lump of wax was softened in front of the flame gradually and cautiously. The bite was the most difficult. Teeth were carved and fixed to tacks of copper or iron driven through the plate. Another method was to carve teeth (when a few were missing) in one block and a double string was passed through the whole. The loop goes over a tooth on one side, and the loose ends were fastened to another on the opposite side. Tortoise shells were used in mechanical dentistry for plates. Its strength, cleanliness, durability and low specific gravity, its superiority over sea horse and ivory as the basis of artificial teeth was undoubted, and that when used in connection with mineral teeth its advantages were obvious. It was capable of receiving a high degree of polish.

Many were the formulae for the manufacture of dentures, every one had his own, a secret which was guarded with utmost jealousy.

The goldsmith's art is to such antiquity that it is impossible to put a date to the first use of thin strips of gold for plates, and for attaching loose teeth to the more firmly standing neighbouring ones. It was also done with gold and silk threads.

J. H. Badcock says "It is well known that old Indians filled up in a neat manner the gap left by a fallen tooth, with small plates of gold". It is related by Bontius, that the Indians who lose their teeth while young, replace them by others for gold. Carrier says "In parts of India where the idea is that the blacker the teeth, the more beautiful they are it was the custom to set off this beauty by small plates of gold inserted between them. Mother of pearl was largely used for manufacturing false teeth".

Badcock says "The habit of tying loose teeth to sound ones is an ancient custome among Indians. One of more curious specimens of it was some years ago presented to the Medici Chirurgical Society of Edinburgh. It was taken from the mouth of an Indian queen and consisted of the whole of the lower jaw united by gold wire, which had been removed in one piece, the only point of attachment to the mouth being the apices of the roots of the wisdom tooth. The teeth of the upper jaw were united in a precisely similar way".

In Moghul times, that is, from the 14th to the 17th century great impetus was given to the arts of all descriptions including the beautifying of the mouth, says Dr. Ahmed. "The Court Dentists preserved for the royalty the entire denture kept the same clean". It is in that period we find records of gold, jade, and diamond inlays being inserted in the mouth of ladies of the royal families. Tooth picks of gold and silver and tongue scrappers of the same metal were in the height of fashion.

Various castes had their own signs of distinction. In some gold fillings on the labial surface of the upper central incisors were and are still inserted as a sort of caste mark. A peculiarity of Katras in Southern India was of hacking the front teeth into points until they closely resemble the teeth of a shark. This they were able to do by using fragments of stone or shell, or even fish bones with great adroitness, badgioning the gums with coca during the process. The Santals or hill tribes have gold fillings in the front teeth for decoration.

J. D. Logan says "The Hindus knew the art of dentistry, for Belzoni and others found artificial teeth of sycamore wood in ancient sarcophagi the method of fixing being by attachment to the natural organs with ligatures of bands of cords, or gold and silver wire".

Dr. Johns of Darjeeling had two very interesting cases to mention to uphold the antiquity of Indian bridge work. On examining the teeth of Tibetan nobleman, he found two upper centrals and left first bicuspid replaced by beautifully carved ivory teeth out of elephant's tusk, one piece for the two centrals and another for the bicuspid. Both the pieces were drilled through the approximal surfaces and two pieces 22 karat gold wire inserted in each piece and cemented.

These gold clasps, the palatal ones being thicker than the labial, fitted around the adjoining teeth to keep them in position. He was able to take out for cleaning purposes. The teeth were carved by one of his carpenters and he had been very comfortable for several years.

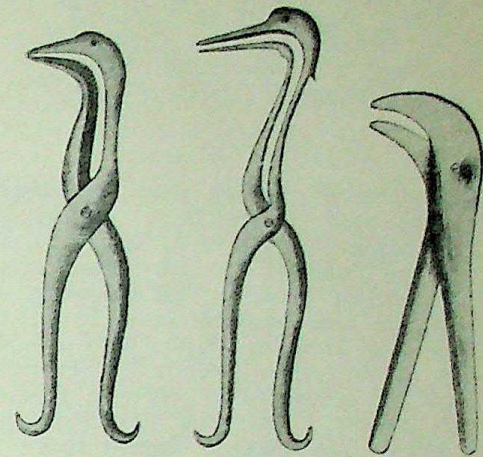
The other case was a Hindu lady who had two superior laterals extracted by the village goldsmith owing to abscesses. She being a high class orthodox Hindu, ivory of any kind could not be utilised, so the ingenious goldsmith had successfully made use of hard sea shells for facings. A neatly made piece of 22 karat gold plate attachment covering up the palatal surface of both centrals extending from the gingival margin to the incisal edge and slightly over the approximal surfaces had been made. To the middle of this wire was soldered, which came over to the labial side as clasps. This held the appliance in the mouth. Two pieces of neatly shaped sea shell facings were drilled through the labial surface and riveted. The removable bridge used to fit in like a press button and firm in the region. The patient experienced great comfort with them.

"It was altogether a remarkable and magnificent piece of work for a humble goldsmith" he says "which I am sure will defy many modern prosthesis".

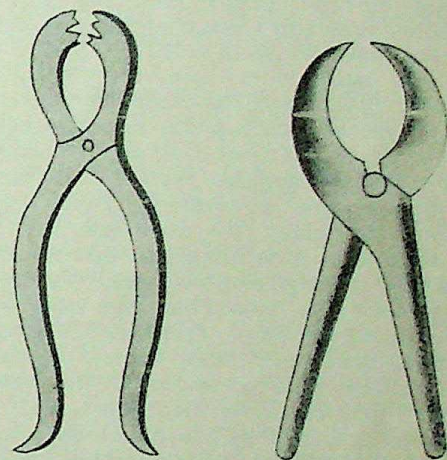
Here are two typical cases of perfectly made removable bridges and they certainly established that the Indian goldsmith is by far the most clever and ingenious craftsman in this art among the people of antiquity.

Information from the book "Dentistry in Ancient India", by K.M. Choksey, published by "The Popular Book Depot, Lamington Road, Bombay 400 007, 1953.

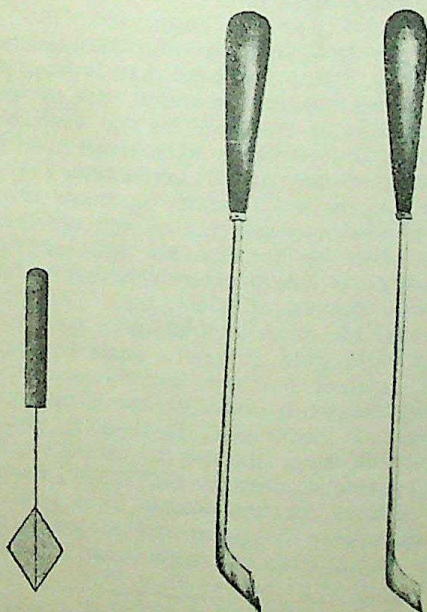
Instruments used by Ancient Hindus in Dentistry



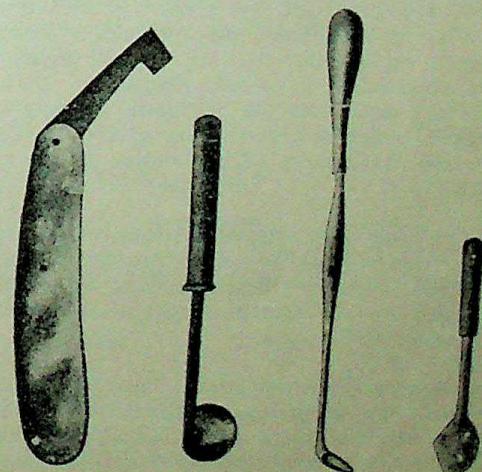
Kakamukha Svastika (Crow forcep) Kankamukha Svastika (Heron forcep) Kankamukha Svastika (after Thakore Saheb)



Sinhamukha Svastika (Lion Forcep) Tarkasmukha Svastika (Hyena forcep) (after Thakore Saheb)



Danta Sansku (after Thakore Saheb) Danta Sanku (Sushruta) Danta Sanku (after Thakore Saheb)



Kuthara (Axe) Kuthara (after Thakore Saheb) Sarpunkhamukha Sala (Tooth elevator) Sarpunkhamukha Sala (Tooth elevator)

INTRODUCTION:-

Joseph Murphy says "that the nations of Hindustan, especially the Brahmins or priests of Brahma take extreme care of their teeth. Every morning they scrub them for about an hour with a small twig of the Fig tree as this custom is prescribed in the most ancient codes and ~~of the Republic~~ ^{of the Republic} Domains of India, it reverts, without doubt, to the remotest

To show you how profound and complete was the Old Dentistry I may mention that it was also aware of a very rare dental condition "the perforation of the forcepts is exhibited in the Temple of Apollo at Delphi. * Arabians even more than the Greeks avoided this operation of extraction. For the proof of the existence of some of these dental operations one need not search into the old Indian literature, for even up to this day you see them performed by Indians who had not slightest training in the Western System of Dentistry. We come across hundreds of cases in which front teeth are decorated with gold or jewel studs by Indian jewellers. If Indians (ancient and modern) could drill holes in the teeth and fill them up again, for the purpose of decoration, it is quite natural that they should have thought of filling up the cavities caused in the teeth by (कृमिदन्त) (Krimi-danta) i. e. Caries, or the decay of the tooth. As a dental surgeon I appreciate the difficulty of drilling a through and through hole (which is

History of the Human Teeth, by Joseph Murphy,
page 43.

required for this decoration) without killing the nerve in these teeth; and yet thousands of teeth are with impunity perforated for this decoration.

Another dental operation that from time immemorial is handed down from father to son, or from teacher to pupil, is the operation of Ligaturing the teeth. Even to-day there are some jewellers (सुनाकर) who specialize in the operation I have seen hundred of human teeth so ligatured; and as a dental surgeon I admire this clever art of the Indian jewellers. These methods of decorating and ligaturing the teeth by the jewellers are but the vestiges of the once famous dental operations of the old Indian dental surgeons, of filling in of the teeth for (कृमिदन्त) krimi-Danta, i.e. Caries of the teeth, and ligaturing for the purpose of tightening the teeth that got loose due to disease. Other remedial operative treatments done by old Indian Dental surgeons were the extraction of the teeth, and removal of the tartar; (see diagrams of forceps and scalers). It seems from the literature that the nature of tartar, and of the pathological conditions caused by it were well understood by Old Indian Dentistry for therein it is enjoined that it must soon be removed. For the pathological conditions caused by it, it is said that "if allowed to remain long, it will destroy the gums and bone, and may cause pus, which may give rise to foul breath from the mouth, and may ultimately loosen the teeth. This pathological condition is called (उपकुशा) Upakusa, and is the same as what is meant by Pyorrhoea alveolaris of today. The mention in the Old Indian Dentistry of the two diseases Krimi-Danta i.e. Caries of the tooth and Upakusa, i.e. Pyorrhoea alveolaris, shows that that these diseases are ancient diseases, and not recent ones as is supposed by many people. Since the diseases like (कृमिदन्त) -Krimi-Danta, i.e. Caries of the tooth and (उपकुशा) -Upakusa i.e. Pyorrhoea alveolaris existed then, the Old Indian Doctors must have taken recourse to the extraction of these diseased teeth. Then it is but natural that having extracted them, they should have devised some method of fixing their artificial substitutes. That they did supply artificial teeth in those days is certain from the fact of the mention of Ashvin having supplied a set of artificial teeth to Pushan.* Another such mention of artificial teeth which dates back to 1314 A.D., we come across in Elphinstone's History of India wherein he says that "after having been beaten in the battle the dead of Jai-chandra, the Rathor Raja of Conouj, was recognised by his false teeth". As said above, the Old Indian Dentistry made full use of India's wealth of vegetable drugs for the relief of dental sufferings. Its Materia Medica compares very favourably with the Dental Materia Medica of the present day.

Gentlemen, such as I have described above was the Old Indian Dentistry. Then you will ask what happened to it, to have so killed it that no trace of it was noticed in India for centuries till western Dentistry came in this country to supply its dental wants. What killed the Old Indian Medicine also killed the Old Indian Dentistry is obvious. And what, I feel I hear you ask, killed them? The old Indian Medicine, including Dentistry

was at its zenith till the time of the Mahomedan invasion of India in the tenth century, when it received its first rude shock. This was the beginning of its decline, for nothing can flourish without the support of the State which now passed under foreign domination, it was during this time of the Mahomedan Rule (One thousand and one to seventeen thousand and seven), it seems, that India first came in contact with the European Nations, the contract that further strangled this indigenous medical system and its dentistry. After the Mahomedan Rule the Peshvas came in power (seventeen fifteen to eighteen eighteen) and under them the old Indian Medicine struggled to revive, then after the Peshvas came the English, and their advent in the eighteenth century brought about the death of the once famous and perfect medical science, because the English came with the pre-conceived notion that Indian medicine was a quackery, and the Hindu works on the subject a repository of sheer nonsense. Not only did this prevail among the English people, but also amongst some Indians with a mentality that everything European is good and every thing Indian is bad. And who because of such mentality lost their confidence and national pride in the Indian Medicine including the Dentistry. This, gentlemen, was the reason of its death, and consequence disappearance from this country.

Such, gentlemen, was the Dentistry in ancient India. You must have often heard that accusation levelled in and out of season by person that the old Indian Medicine is a quackery. May I ask could India possessing as it did, a polished language, a cultured literature. an abstruse system of philosophy, and such fine Dentistry. as I have described above, encourage quackery for its medical system? Gentlemen, you know that saying, "Nothing is new under the Sun". If that saying is true? and true it is, it is possible, nay I am convinced, that modern Dentistry is the rebirth of the Old Aryan Dentistry. Reading its literature on Materia Medica and therapeutics I feel that if investigated in the right spirit of seekers after the truth, modern Dentistry may yet find plenty in these sections to learn from the Old Aryan Dentistry Whereas, so far the dental profession has done its homage to Egypt and Greece as the probable countries of the birth of Dentistry, I for the first time by this paper do my homage to India as the certain land of its birth. I am happy to do homage to the country, to whom that homage is properly due.

Question for this Issue :

WHAT ARE THE BOOKS WRITTEN IN ENGLISH ON HINDU VASTU SHILPA SHASTRA DURING FIRST FIVE OR SIX DECADES OF THIS CENTURY?

Dr. S.V. Shah
Bombay

*History of Aryan Medical Science, Public Domain Gurukul Kangri Collection, Haridwar
sahab of Gondal, p.29.

London Calling

Taj Mahal and the Great British Conspiracy

PART 4

1886 to 1886

1886

British annex upper Burma

Epigraphica Indica Volume I was edited by J. Burgess. J. Fergusson dies. Last Nizam was born.

1887

"Les Civilisations de l'Inde" by Le Bon (Gustave) was published. On page 575 we find - "Agra Le Taj - Vue d'ensemble du monument."

The monument in white marble was commenced by Emperor Shahjahan in 1630 A.D. to serve as a tomb of one of his wives. (Le Bon does not tell us - which one) 20,000 men worked on it for 17 years (but there is no reference to Tavernier). The style is Persian but rare Hindu motifs are seen. Humayun's tomb served as a model for the construction.

Cunningham was knighted.

28 December. Syed Ahmed Khan said "Muslims would suffer from majority rule. In the existing state of communal temper Muslims would always vote for a Muslim candidate and Hindus for a Hindu candidate; and as the Hindu formed the majority of the population no Muslim would ever be elected..."

1888

Syed Ahmed Khan instigates Muslims not to attend Congress session at Allahabad and starts United India Patriotic Association (In August) Congress attacked as seditious organisation by Sir Auckland Colvin Governor of the U.P.

"College History of India. Asiatic and European" by J.T. Wheeler was published.

"Rambles and Recollections of an Indian Official" by Sleeman was reprinted by R.C. Muzumdar. There is no editing.

"India" by Sir John Strachey, GCSI, former Lt. Governor of North West Frontier Province was published Under Architectural Monuments we find.. Except in Athens nothing has ever been built more beautiful than the Taj erected at Agra by Shahjahan as a mausoleum for his wife, and in which he himself was later buried...." There is reference to and extract from J. Fergusson's "History of Indian and Eastern Architecture", including the sentence - "when used as a Barah Durrie or pleasure palace, it must always have been the coolest and loveliest of garden retreats."

Handbook to Agra by H.G. Keene was published. In addition to what he has said in the 1874 edition, he further adds as follows : (Prefactory Note) "... Although the writer has used his best endeavours to render his information accurate, by verifying it from the best and most original sources, yet he has abstained from controversy..."

was lined by the villas of the nobility" (Then follows an extract from Bernier's book) she appears to have died before the building had begun. In all probability however the garden had been already enclosed and was a favourite retreat of the deceased in her lifetime.

P23 Arjumand Banu Begum, called Mumtaz-i-Mahalor "Exalted one of the Palace" was niece of Shah Jahan's stepmother Married to Shahjahan - then heir apparent (this is false) in about 1615. she bore him seven children, and died in childhood of the eight on in about 1630. (False. She bore 13 children, 6 only survived, she died while giving birth to the 14th child). We learn from Father Manrique, a Spanish monk of the Augustinian Order (wrong-He was a Portuguese from Oporto) who was at Agra in 1641, that the plans and estimates were prepared by a Venetian, by name Geronimo Verroneo. The emperor ordered him to estimate for three khrs of rupees. Verroneo died at Lahore before Manrique's arrival, and long before the work was completed. (What was Verroneo doing at Lahore, 400 miles away from Taj? and if Manrique never met him, how did he know that Verroneo was the Architect? What buildings did Verroneo design and supervise before Taj? Keene does not answer such simple questions). The work is then believed to have been made over to a Byzantine Turk (who?) (Note - Manrique says nothing about this handing over).

P25 ... The notion that the Taj was designed by the Italians is confirmed by Manrique. But nothing can be less Italian than the general conception of the building with its simple and even stiff contour.

P26 The following figures are taken from the Guide to Taj. "The native account of the cost of the Taj gives Rs.98,55,426 as having been given by the Rajahs and Nawabs. And out of the Emperor's private treasury Rs. 86,09,760 which is equivalent to £ 1,846,518 or nearly £ 2 millions, There are said to have been two silver doors at the entrance of the Taj which are stated to have cost 1,27,000 rupees and were studded with 1100 nails, each having a head made of a Sonat rupee. These gates were taken away and melted by the Jats when they attacked and sacked Agra. (Keene refers to Tavernier and Bernier, the two Frenchmen who visited Taj Mahal in 1665. Both of them say nothing about these costly doors. No other traveller saw them either. How did the Jats remove the silver doors that did not exist?

P27/28 Here we find extracts from B. Taylor's book.

P29/30. Here we find extracts from Bernier's book Mullahs do continually read the Alcoran with a profound respect to the honour of Taje-Mehalle ... The fortress and all those fair houses of the omrahs that are built along the river ... the mausoleum or tomb of Taje Mehalle is something worthy to be admired.

P31. Here we find extracts from Tavernier's book.

P21. "..... In Bernier's time, this large public domain Gurukul Kangri Collection, Haridwar. P32. The false mosque (i.e. Jawab) is as fine

as the true. It has been hitherto appropriated to the use of travellers and parties of pleasure ... Footnote on page 33 ... The domes are all of white marble. The basements of the building only are of red stone. (Note - So Keene confesses that there are basements below the 1000 x 300 ft. Terrace. Why did he not ask to open them up? Keene once again does not reproduce the cross-section from Fergusson's book.

p34..... It is in a perterre beneath this mosque that the enclosure is shown where the remains of the empress rested while the Taj was being built (But what is the basis for this story or the location of the spot?)

1889

Dr.V. Ball translates and edits Tavernier's "Travels in India". In the Preface he tells us - "..... upwards of 200 years have elapsed since an English translation that by John Phillips has appeared Acting however, under the advice of Colonel Yule, I commenced the translation and annotation in the year 1886 the work was not however completed in any way under his supervision.

To Mr. V.A. Smith of the Bengal Civil Service I am indebted for much assistance and advice while passing this first volume through the press. His departure from India has deprived me of a continuation of his valuable aid in connection with the second volume".

From the "Introduction" we learn about the routes of Tavernier's six voyages to India. It is clear that Tavernier went to Agra on only two occasions - winter of 1640/41 and November 1665. (Pages X to XXIX).

On pages 109/111 ... (Book I, Chapter VII) Tavernier's well known story is given. See events of 1811. In addition we are told "..... It is said that scaffolding alone cost more than the entire work. (Surprise! Surprise!!) because for want of wood, they had all to be made of brick, as well as the supports of the arches." (Note : These lines are there in the original French book of 1876, but were missed by John Phillips. The information is however totally false. There are plenty of forests around. Agra District Gazetteer of 1905 records on page 14" - Jungles -- the latest return shows only 646 acres under grass; 2023 acres of bush or tree jungle and 2,936 acres occupied by scattered trees. Two-thirds of jungle area is in Agra tahsil ..." and this is 240 years after Tavernier. District Gazetteers of surrounding districts give similar picture. Over the years forest areas have sharply declined. Thus as the scaffolding was of brick its purpose must have been quite different.

Dr. Ball worked in the Geological Survey of India from 1864 to 1881. His notes deal mainly with geography and minerals.

- Tilak joins Indian National Congress. At the annual session a Muslim delegate made a violent speech and claimed that Muslims should be elected in equal numbers with Hindus although the Muslims population was smaller. (Ref. Lokmanya Tilak by Dhananjay Keer 1969, P52). This is at a time when Jinnah was only 14 years old and Jawaharlal Nehru was just born, shows Muslim mentality quite clearly.

J. Burges retires as Director General of Archeological Survey of India.

1889-90

Duke of Clarence, elder son of Edward VII visits India.

1890

"Picturesque India" by W.S. Caine was published. Mahatma Phule died. Historian Datto Vaman Potdar was born.

1891

Annual Report of the North West Provinces Circle, Archaeological Survey of India says "..... Taj Mahal - as yet unsurveyed." So 20 years after Carleyle's report we find Taj Mahal not even surveyed. Unbelievable!

John Murray the famous publishers of London have been publishing travellers guides to various provinces of India. In 1821 they combined them all together. It was to a great extent rewritten, thoroughly revised and condensed by Sir G.W. Forrest, Keeper of Records, Government of India. The title is - Murray's Handbook (for travellers) to India and Ceylon. On page 167 we find ".... Taj Mahal - the building is properly named Taj bibi ka Roza (There is no documentary proof for this suggestion).

..... "It was repaired before Prince of Wales' visit in 1875-76." This is an extract from Fergusson's book including the sentence - when used as a Barahdari or Pleasure Palace it must always have been the coolest and the loveliest of garden retreats. The cross section through the Central Edifice, however, is not reproduced.

Archibald Constable edits Bernier's "Travels in the Mughal Empire". In the footnote on page 294 he reproduces an extract from Fergusson's "History of Indian and Eastern Architecture", 1876 edition, but cleverly deletes the sentence when used as a Barahdari or Pleasure Palace it must have been " Moreover Bernier is believed to have said "Shahajahan killed the Architect of Taj so that no one else may build a rival to it". But we find no mention of it in the book.

1892

Cunningham in his "Mahabodhi" writes - "Formerly it was settled belief that the ancient Hindus were ignorant of the Arch 30 years ago I shared this belief with Mr. Fergusson ... But during my late employment in the Archaeological Survey of India several buildings of undoubted antiquity were discovered in which both vaults and arches formed part of the original construction (Supra p 79) And he particularly referred to the vaults in the temples at Kusinagara, Barnarak, Bhitargaon and Nongash.

(Sir Alexander Cunningham and the beginning of Indian Archaeology by Abu Imam 1966, p 170).

Similar discoveries were made in 1976 - see "Indian Archaeology" an annual published by Archaeological Survey of India 1976-77, pages 108 to 115.

This vital information has been consistently ignored by historians of architecture.

1893

Slleemans "Rambles and Recollections of an Indian

Official" was edited by Vincent Smith. In the foot-notes (Vol. I pp 380/390) Smith tells us -

..... The lady died on the 7th July 1631 (old style)
 This testimony of an eye witness (Ball's Tavernier Vol. I p 110) appears to be conclusive as to the time occupied in the building..... The Empress died in July 1631, and the work was begun immediately after her death. (Mumtaz lay buried at Burhanpur. After six months the coffin was exhumed and sent to Agra. Shahjahan came to Agra after another six months. How could the work begin immediately after her death?)

..... Tavernier visited Agra several times (Ball I, 142, 149) and he was in Agra in A.D. 1653, twenty two years after the death of the Empress. He may well have been at Agra in that year. (Note : What a wishful thinking! As we have already noticed from the events of 1889, Ball gives details of routes of Tavernier's six voyages and on this particular one, his route was Masulipattam - Madras - Gandikot - Golkonda - Surat - Ahmedabad - Surat - Aurangabad - Golconda - Surat. By no stretch of imagination could he have gone to Agra. And Vincent Smith himself helped Dr. Ball in editing Tavernier's "Travels in India").

..... The site on which Shah Jahan intended to build his own mausoleum is exactly opposite the Taj and is known as Mahtab Khan's Garden (bagh). The foundations of an oval structure 250 ft. long and 217 1/2 ft. broad can be traced and are described by Mr. Carlleyle in Archaeological Survey Reports Vol. IV p. 180).

..... It is, at all events, certain that the incomparable Taj is the product of a combination of European and Asiatic genius. (Note : Vincent Smith makes no comments on the cost).

P.428. Footnote - The Jats seem to have captured Agra in 1764. "That capture was followed by a sack, during which unless tradition lies the Jats shot away the tops of minarets flanking the entrance to the Sikandara tomb robbed from the Taj and melted down two silver doors which had cost Shahjahan over 1 1/4 lakhs of rupees (N.W.P. Gazetteer Vol. VII p.619).

"Travels in India a Hundred Years Ago" by Thomas Twining was published. The author visited Agra, Taj Mahal and Delhi in 1794. He tells us ".... The palaces of Agra and the Taje-Mehal the mansions of the living and of the dead were immediately before us The derwan or portar who even had the civility to accompany me through the interior courts to a large enclosed area what he said was there were for elephants and horses of the Padshah suwarree (the Emperor and his suite) [Note - What are elephants and horses doing inside a tomb?]

..... The construction of the Taje was begun about the year 1630 and is said to have occupied 20,000 men for 22 years and to have cost a crore of rupees. It was the intention of the Emperor to build a similar mausoleum for himself on the opposite side of the river, and to unite the two by a handsome bridge; but his death, or rather, perhaps the distractions of the latter years of his life, prevented the accomplishment of his extravagant design..." [Note : Twining repeats what Tavernier says but does not refer to him. He was later made Governor of Bengal and was sent to 18 months rigorous imprisonment.

of Bihar. It is easy to see how the legend filtered through textbooks used in India. Twining returned to Taje Mehal after few years. This time he tells us "...Visit to a large palace more to the right or lower down Jumna ..." [Note - This is Raja Madhao Singh's Palace mentioned in the Dutch Factory Records. See events of 1905, 1928]

Gen. Cunningham died.

"History of India from the earliest times to present day" by H.G. Keene was published (Editions 1906/1915).

1895

"The Archaeological Survey of India reports are feeble, inane and all but useless ... and the Government has reason to be ashamed of the majority of the volumes...."

(Pioneer the Anglo Indian Newspaper of Lucknow, 12 July 1895)

Viceroy Lord Elgin visits Agra.

1896

"History of Architecture" by Sir Bannister Fletcher was published (1st edition). Indian Architecture is not even mentioned.

"Rulers of India" by Sir W.W. Hunter was published.

Indians in Natal, South Africa were deprived of their franchise rights.

"Agra Historical and Descriptive" by Syed Muhammad Latif, Fellow of the Royal Asiatic society of London was published. He tells us - p 100 ... The space between the Fort and the Taj was once studded with villas of the nobility, the stately edifices and superb palaces of the omerahs of the Mughal Empire ... They have been also noticed by contemporary historians, Mulla Abdul Hamid Lahori, the author of Badshahnama and Mohammad Saleh author of Amal-i-Saleh (unfortunately no more details are given).

p.105 ... The site selected for the mausoleum was to the south of the City - IT WAS ORIGINALLY A PALACE OF RAJA MANSINGH but it was now the property of his grandson Raja Jey Singh. His Majesty gave the Raja a lofty edifice from the Khalsa estate in exchange for THIS BUILDING. (False - Badshahnama tells us that Raja Jey Singh was given a piece of government land NOT a lofty edifice, and even the location and size of this land is not mentioned), and the spot was used for the mausoleum of the deceased empress. (Note So what happened to the PALACE OF RAJA MAN SINGH? Many later day authors refer to Mr. Latif's book but twist the fact and say "A piece of land was purchased from Raja Jey Singh").

P109 ... Here we find a reference to Fergusson, including the sentence - when used as a Barrah barrie or pleasure palace it must have always been the nicest of garden retreats.

1897

Henry Beverige of Bengal Civil Service translates Akbarnama of Abul Fazal.

H.F. Blochman's translation of "Ain-e-Akbari" Vol. II was published.

He was later made Governor of Bengal and was sent to 18 months rigorous imprisonment.

Gandhi was saved from a lynching mob in Natal, South Africa.

Subhash Chandra Bose was born.

1898

Yadunath Sarkar becomes Professor of History of Presidency College, Calcutta.

Sir Sayyad Ahmad Khan dies.

1899

"The embassy of Sir Thomas Roe to the Court of the Great Mogul" was edited by W. Foster.

Viceroy Lord Curzon visits Taj Mahal (December)

Keene's Handbook to Agra Delhi etc. was published - No change from the 1888 edition of Handbook to Agra.

1900

In the annual report of the North West Provinces Circle ASI we find a map of Taj Mahal, prepared by two Executive Engineers M/s. Joseph and Lall, But this map is no different from the 1825-28 map of Col. Hodgson. In this report we find -

Gaushala Burj -
376 ft. of marble bordering was renewed.

Gaushala -
This building was in a very dilapidated and dangerous condition.

Gaushala is a Sanskrit word for cowpen (a large 'cowshed'). It has not been shown on the plan (scale inch to 200 ft. RF 1/2400)

Following were published

"Rise of the Maratha Power" by Justice M.G. Ranade

"History of British India" by W.W. Hunter

"Muhammedon Architecture of Ahmedabad" by J. Burges.

Justice M.G. Ranade and Prof. Max Muller die.

1901

J. Burgess, former Director General of Archaeological Survey of India edits. Murray's "A Handbook for Travellers in India". Information on Taj Mahal is unchanged from 1891 edition. The cross section through the Central edifice is given after extracts from Fergusson's book, but it has been deliberately tampered with. The two basements below the so-called real grave are not now seen. (And this cheating goes on even in the 1981 edition).

Burgess says nothing about the several chambers, around the so called real graves, which remain sealed up. He however tells us on page 170 "... There are originally 2 silver doors at the entrance, but these were taken away and melted by Surajmal and his Jats. It is uncertain who was the principal architect".

Queen Victoria dies. Edward VII becomes King-Emperor.

1902

John Marshall was appointed Director General of Archaeological Survey of India. He remains in charge till 1931.

In the annual report of the N.W. Provinces Circle we find a map of Taj Mahal prepared by an Execu-

tive Engineer Polwhele. Again it is not different from the 1825-28 map of Col. Hodgson. It is astonishing that the map published in 1801 by Daniells is far more detailed than either maps produced by Archaeological Survey of India.

A. Beveridge's translation of "Humayun-nama" was published.

Swami Vivekananda dies.

1903

"Mediaeval India under Mohammedan Rule A.D. 712 to 1764" by S.L. Poole was published.

Lord Curzon declares his intention to partition Bengal (December 7)

Two staircase openings were discovered in red sandstone terrace of Taj Mahal.

1904

Curzon tours Bengal to propagate to Muslims the advantages of the partition of Bengal.

Vincent Smith's "Early History of India" was published (editions 1908/1914/1924)

"Agra and Taj" by E.B. Havell was published. This Principal of the Government School of Arts, Calcutta, repeats the usual story. On pages 73/74 he tells us " ... According to the old Tartar customs, a garden was chosen as a site for the tomb ... Such a garden, in the Mogul days, was kept up as a pleasure ground during the owner's lifetime and used as his last resting place after his death. [Havell repeats Fergusson's fantasy]. The old tradition laid down that it must be acquired by fair means and not by force or fraud. So Rajah Jay Singh, to whom the garden belonged, was compensated by the gift of another property from the Emperor's private estate. (Havell gives no reference. He gives no reason for Shahjahan not building the tomb on his own estate. Shahjahan next appointed a council of the best architects of his empire for preparing the design for the building (Havell does not give us a single name). Drawings of many, of the most celebrated buildings of the world, were shown and discussed. (Neither Havell nor any one else has seen even one of these drawings. There is no record of any discussion). The design eventually accepted was by Ustad Isa 20,000 men were employed in the construction, which took 17 years to complete. The sarcophagus was originally enclosed by a fence or screen of gold studded with gems. This was removed in 1642 and replaced by the present exquisite screen of pierced marble. [Note - The learned Principal repeats the whole story like a parrot. He never stops to think. In the footnote on page 74 he tells us - Tavernier says 22 years probably including all the accessory buildings]. The Taj also possessed formerly two wonderful silver doors These silver doors were looted and melted down by the Jats in 1764. (We wonder how not even one European Traveller saw these silver doors)... A sheet of pearls valued at several lakhs of Rs was made to cover the sarcophagus. This was carried off by Amir Hussein Ali Khan in 1720 as part of his share of the spoils of Agra. On page 83 we find "... Surrounding the central chamber are eight smaller ones for the mullahs who chanted the koran and for musicians who played soft Indian and Persian melodies ... [Note - Playing music in a tomb?]

Japan defeats Russia and proves that Europeans can be defeated by Asians.

1905

"History of the Taj" by Main-ud-din Ahmad was published. This General Superintendent of Muttra (Mathura) Collectorate repeats all the above information given in Havell's book. In the preface Mr. Ahmad tells us that it is the translation of his Urdu book Muin-ul-Asar published in 1894 (This seems to be wrong. It should be 1904). He says that Lt. General Sir Alfred Gaselee, Commanding the Eastern Forces Eastern Command, suggested him to translate the Urdu book into English. The book is, of course, dedicated to Gaselee. Mr. Ahmad tells us -

P4 - Jahangir conferred upon his daughter-in-law the title Mumtaz Mahal (False - Jahangir, in his own memoirs Tazuk-i-Jahangiri nowhere mentions this title. He always refers to her as Asaf Khan's daughter. The memoirs were translated into English in 1909 and 1914).

P12 - The plot on which the Mausoleum stands originally belonged to Raja Mansingh's grandson Raja Raisingh. It was exchanged for a good piece of land in the royal domains. (Ref. Badshahnama of Mulla Abdul Hamid of Lahore. Vol. I page 403). Mr. Ahmad refers to Mr. Latif's book of 1896, in the bibliography of his original Urdu book. But he now twists the facts and changes Raja Mansingh's Palace into a plot.

P35/36 - Here we find a description of the 22 basement rooms. Mr. Ahmad does not say when they were discovered. But he confesses "The real object of building them remains a mystery".

P 46/47 - The "Badshahnama" tells us that gold railing set in costly gems was prepared in 1632. It served as a protection to the tomb. It was made under the supervision of Bebadal Khan, Master of the King's kitchen ... (Badshahnama Vol. II pp. 325-326).

P53/54 - The spire (of the main dome) has been stripped off its gold coating, the copper only of which it is made is left bare. (Mr. Ahmad does not tell us - who stripped the gold coating?).

P55 ... (At present the Western "Pura" is filled with flower pots and valuable plants. It is a delightful pleasure ground. Half of the other "pura" is occupied by a cowstable. Over against the puras and West and East respectively from the gate of Mumtazabad lie tombs of sati-un-nisa Begum and Sarhindi Begum).

Note - Mr. Ahmad does not say why a cowstable was built in a mausoleum. He has obviously been ignorant of Daniell's book of 1801. The map in that book clearly shows the same tombs as those belonging to Akbarabadi and Fatehpuri - two concubines of Shahjahan. It also seems that Mr. Ahmad was possessed by Karl Marx. Sati-un-nisa was a maid of Mumtaz whereas Sarhindi was a Persian princess and Shahjahan's first wife. By no stretch of imagination would both be entitled "Begum". The tombs bear no names.

P56 ... Mumtazabad

The pretty name Mumtazabad was subsequently converted into Tajganj probably by corrupt usage.

[Mr. Ahmad gives us no parallel example of such corruption. Moreover, contemporary records do mention Tajganj). See "The English Factories in India 1646-50 by W. Foster Publishers. Clarendon Press 1914, pages 220 and 299].

P.59 - Death of Sati-un-nisa ... The Emperor asked for 10,000 rupees to be spent for her funeral expenses (And yet Mr. Ahmad cannot say when she died)... A year and some months later the coffin was conveyed to the capital and finally interred near the Jilokhana square to the south west of the Rauza. The building over the tomb cost 30,000 rupees.

P61. The Sculpture of Sarhindi Begum

This sculpture is situated over against the maqbara of Sati-un-nisa Khanum and to the southeast of the Taj Mahal. (Once again Mr. Ahmad cannot tell us when and where did she die?). It is exactly like the Khanum's maqbara ... The one is a copy of the other with this difference that the stonework of Sati's tomb is adorned with floral work; while Sarhindi's tomb is only ornamented with mosaics (so the maid's tomb is more important than that of the Emperor's wife).

P66 ... In a manuscript which has fortunately come to our hand very recently a detailed account of the expenses has been entered by the Treasurer Rodardas ... We are not of course in a position to vouch for the accuracy of these figures.

P70 ... According to Tavernier it was completed in 22 years. Tavernier was in India in 1653, 22 years after the death. [Note - This is totally false ... On his third voyage Tavernier's route was Masulipattam - Madras - Gandikot - Golconda - Surat - Ahmedabad - Surat - Aurangabad - Golconda - Surat. It is true that he left Surat for Paris on 8th January 1654. But during his stay in India he went nowhere near Agra. Vincent Smith has also played the same mischief, see events of 1893.]

P74 ... The first URS of Mumtaz Mahal

Urs is peculiar to the Mohammadans of India. It is a sort of death anniversary, a commemoration of the demise of a holy man with solemnities, prayers and blessings for the soul of the dead. It is held annually on the recurrence of the day on which he died.

Now this ceremony was conferred by Shah Jahan in honour of Mumtaz the first time in 1041 A.H. According to the Badshah Nama the Urs was held with uncommon enthusiasm ... All the princes, courtiers and the nobles at the capital, attended it ... The nobles sat according to their respective ranks ... the king himself being among them. Yamin-ud-daula Asaf Khan, father of Mumtaz and Mohamad Ali the Persian envoy took their seats along with them as desired by the king (Note - on page 421 of the same Badshahnama, we are told that Shah Jahan came to Agra on 1st Zi-il-Hijja 1041 A.H. that is 13 days after the death anniversary of Mumtaz. Peter Mundy confirms this. He says that Shahjahan came to Agra on 1 June 1632 and naturally says nothing about the Urs. See events of 1914).

Mr. Ahmad tells us of some remarks on his book, in the edition of 1924

1

Government House
Naina Tal
25 April 1904

Sir,
..... the Viceroy (Lord Curzon) is leaving Simla on the 28th instant. The book has been a labour of love to the author and is a valuable guide to the Taj.

Yours faithfully,
H.G.S. Tyler, ICS
Private Secretary

2

Fantasia
March 22nd 1905

Dear M. Muin-ud-din,

..... a handsomely bound copy forwarded to Lord Curzon ought to prove acceptable. You refer to that nobleman's services in the cause of the conservation of ancient historical buildings in India, but that is not enough; let him be furnished with practical evidence of the fact that there are persons yet in the country who besides possessing an eye for the beautiful in architecture, are capable of deep and persistent research into the history of the past and that their observations can be the fruit of assiduous investigation.

..... Here and there an original fact is disclosed evidencing close study and the habit of analytical reasoning.

I quite agree with you, there is no foundation whatever for the allegation that a Venetian or a Frenchman had a hand in the designing or the construction of the Taj. That is a pure fabrication of the European's brain who consider that no good can exist anywhere but what comes out from them. I myself combated this view when revising the Gazetteer of Agra some three years ago.

Yours sincerely,
J.F. Fanthome

From other remarks we gather that Mueen-ul-Asaar the original Urdu book was reviewed by various persons, during May 1904 and November 1905. We also gather that a copy of the English book was sent to the Prince and Princess of Wales before their departure from India (The "Pioneer" of 2 April 1906) and Agra District Gazetteer prepared by H.R. Nevill, ICS was published.

We are told -

P154.... when the rebellion has been quelled he (Shahjahan) returned to Agra in 1631. While encamped in Burhampur his wife Arjumand Banu better known as Mumtaz Mahal died in childbirth and was buried there. Six months later her remains were sent to Agra and interred in the garden of Raja Jai Singh to the south of the city. Over her resting place the emperor erected the famous tomb known as the Taj Mahal... In 1633 Shahjahan left Agra for Lahore and Kashmir, but two years afterwards he was again called southwards by the state of affairs in the Deccan.

P 212 to 218

... Strand road constructed as CE of a public work of 1837 runs along the river face of the fort.

Mac Donnel Park - extensive gardens that was begun during the famine of 1897. It is known as the Mac Donnel Park. The park covers about 250 acres of ground which was formerly covered with the scattered remains of ancient buildings.

This space was at one period occupied, according to Bernier, by a row of new houses with arcades resembling those of the principal streets in Delhi ("Travels in the Mughal Empire" p 293). There were extensive bazars and houses of masonry, while beyond on either side were the gardens and palaces of the nobles. When the strand road was in course of construction, old houses and foundations sometimes as much as 10 ft. thick were encountered. and had to be removed by gunpowder (British Authorities made no Archaeological survey and kept no records. They simply demolished the remains and wiped out all evidence. See events of 1928)..... The name Taj Mahal is a corruption of her title and is unknown to early writers (even to her father-in-law Emperor Jehangir ? See events of 1905).... Her body was interred in a portion of the garden of Raja Man Singh (Nevill does refer to Latif's book of 1896, but has decided to join in the conspiracy of deception)..... The question of the authorship of the design is disputed. According to a Spanish monk, named Manrique who was at Agra in 1641 the work was entrusted by the emperor to a Venetian, named Geronomo Verroes, who died before its completion.

..... The cenotaphs of the emperor and his wife are surrounded by a screen, this was placed by Aurangzeb who is said to have set it up in place of the golden screen at first erected but removed by Shahjahan for fear of theft, in 1642 (This is wonderful! the golden screen is said to have been in position for 10 years and all of a sudden there was fear of theft ? And yet we are also told that Shahjahan's reign was golden and peaceful and he ruled like a father).

..... In 1784 the Jats carried off the silver doors of the entrance; these were set up by Shahjahan at a cost of Rs. 1,27,000 and were studded with 1100 nails, the head of each of which was made from a rupee. (old baseless stories continue to be repeated. See events of 1893).

..... In 1809 a committee was appointed to supervise the repairs of the Taj work appears to have been carried on but spasmodically till 1876 when the mausoleum was entrusted to Public Works Department.

.....Tajganj - this suburb is said to have sprung up since the foundation of the Taj but tradition states that in earlier days the locality was known as Naumahla and was occupied by the houses of the nobles..... close to the Taj on the east, near the river bank, are the remains of a large palace (This was Raja Madhosingh's Palace. See events of 1893 and 1928).

End of Curzon's reign. He was such an arrogant and oppressive viceroy that one of the attempts to kill him involved Arbindo Ghosh, Rabindranath Tagore and others (ref - an article in the Mahratta of 1 Aug 1952 by Charu Chandra Datta, ICS) and yet when servants of India Society was started they are told "The members of this order were bound by their vows to devote their lives to public service

and to forswear all private gains. They were committed to a frank acceptance of the British connexion as ordained in the inscrutable dispensation of Providence for India's good" (Ref - Political India 1832 - 1932" Edited by Sir John Cumming 1932, page 186). This then was the mentality of the founder Mr. G.K. Gokhale; who commanded respect from Tilak, Gandhi and Savarkar alike. The horrors of the British administration during the 1897 plague or the recent crushing defeat of Russia by Japan made no difference.

Need we say how thoroughly the Indians were brain washed by the British ?

- Curzon tendered his resignation on 12 August 1905 but still put into effect the partition of Bengal.

- A Beveridge translates "Baburnama."

1905-1906

George V as Prince of Wales visits India (9 Nov. 1905 to 19 March 1906) Delhi Darbar held 12 Dec. 1905.

1906

July - Veer Savarkar arrives in London for his studies.

October 1, Aga Khan's infamous petition to Viceroy Lord Minto.

December 30 - Muslim League was in Dacca. Maulana Azad who was present tells us - "..... I remember the two reasons advanced for the establishment of the League (1) To strengthen and develop a feeling of loyalty to the British Government among the Musalmans of India (2) To advance the claims of Muslims against Hindus and other communities in respect of service under the crown. (ref - India Wins Freedom by Abdul Kalam Azad published by Orient Longmans 1959 pp 110-111).

Summary of events and explanatory notes

Politics and Archaeology

- (1) In 1891 Archaeological Survey of India (ASI) tells us - Taj Mahal not yet surveyed. There has in fact never been a survey of it even today - why ?
- (2) Two staircase openings were discovered in the red sandstone terrace. These take up to a floor 17 ft. below the so called real grave chamber. But ASI has kept no record of it, let alone carry out any further exploration. They have fixed grilled doors at the foot of the steps to prevent people from becoming inquisitive. These openings are not seen in the 1902 report of ASI but are mentioned in Mr. Ahmad's book of 1905. The book was received by Viceroy's private secretary on 25 April 1904. Considering the time required for preparing the manuscript, proof reading, printing, binding, posting etc. we conclude that the openings were discovered towards the end of 1903. And in December of 1903 Curzon declared his intention to partition Bengal. He is said to have had a soft corner for the important historical monuments and even

presented a lamp which now hangs in the cenotaph chamber of Taj Mahal; but he ensured that Taj Mahal was not surveyed and may have in fact ordered the sealing, blocking and locking of several portions which were open to public before.

- (3) Palaces on the river bank.
The Red Fort side bank of the river Yamuna (Jamuna) was full of palaces of the nobility as recorded by Bernier. Keene refers to De Laet Joannes's book of 1631 and has himself given in 1874 the names of the owners of these palaces from Red Fort to Taj Mahal, Raja Mansingh's palace (which is how Taj Mahal) being the last one. These were partially destroyed during the famine works of 1837 when the strand road was constructed and further remains were destroyed during the famine works of 1897 when the Mac Donnel Park was constructed. No records were kept before demolition.

- (4) In 1896 Latif confessed that the site chosen for the mausoleum was late Raja Mansingh's Palace, at that time owned by his grandson. Raja Jaysingh. But after Curzon's declared intention to partition Bengal in 1903, we suddenly find the palace suddenly changed into a piece of land.

- M Ahmad (1905)

He even refers to Badshahnama Vol I
Page 403

- H R Nevill (1905)

who prepared the Agra District Gazetteer

Every one has repeated this twisted story and referred to Latif's book ever since. Many have also repeated Fergusson's assertion "when used as a Barrah - Darrie or a plesure palace it must always have been the coolest and loveliest of garden retreats", without realising its meaning.

- (5) Tourist Guide

J. Burgess was Director General of ASI. When he edited Murray's Handbook to India in 1901 he deliberately tampered with the cross-section of Taj Mahal and removed the entire basement floor under the so called real grave chamber. Why ?

- (6) Some dates are very intriguing -
16 December 1905 - Curzon puts the partition of Bengal into effect.
1 October 1906 - Aga Khan's infamous petition to viceroy Lord Minto.
30 December 1906 - Muslim League was formed at Dacca in Bengal. The inference is quite obvious.

Politics and Hindu Leaders

- (8) British rulers skillfully made a show that Hume, Wedderburn and Co. were the real originators of the Indian National Congress which was founded in 1885. In fact they created a mental paralysis and crippled the freedom movement of brain washing Hindu leaders into believing that unless Muslims joined the Congress it

would not become a truly national organisation. At the same time they encouraged Muslims not to join the Congress. Surendra Nath Banerjee the famous Bengali leader wrote in his autobiography "..... we were straining every nerve to secure the co-operation of our Mahomedan fellow countrymen in this great national work. We sometimes paid the fares of Mohammedan delegates and offered them other facilities (p 108)".

In 1887 Hindus withdrew their resolution calling for cow slaughter ban. In 1889 a Muslim delegate demanded parity with Hindus. And thus the capitulation and appeasement went on and on. Hindus themselves would have overwhelmingly rejected Mr. Oak's research findings under such circumstances.

- (9) 1897 marked the Diamond Jubilee of Queen Victoria's reign. It was celebrated in India with all the pomp when people were stricken with famine and plague. The imperial arrogance reached a peak. (just one year before, Indians in Natal, S. Africa were deprived of their right of franchise). Tilak was sentenced to 18 mths rigorous imprisonment, while Gandhi was saved from a lynching mob in S.Africa. Under such conditions Yadunath Sarkar became a professor (1898) and Vincent Smith emphasised (1893)"... It is at all events certain that the incomparable Taj is the product of a combination of European and Asiatic geniuses. H.G. Keene said the same thing in 1888. Both were very closely associated with the Archaeological Survey of India.

The Taj Legend

- (10) We have seen how the details of the now well known legend have emerged. They have been fully dealt with. We have shown how the various assertions, especially the following ones are totally baseless and false.
- Jats removed the silver doors
 - For want of wood the scaffolding had to be made of brick.
 - Tavernier visited Agra several times and he was at Agra in A.D. 1653, 22 years after the death of Mumtaz - His testimony that he witnessed the commencement and completion of the works and that 20,000 men worked incessantly for 22 years, therefore, seems to be correct.
 - The title Mumtaz Mahal was conferred upon the lady by Emperor Jehangir.
 - The tombs in the south east and south west are those of Sarhani Begum and Sati-un-nisa Khanum respectively.
 - A new township around Taj Mahal was founded by Shahjahan and named Mumtazabad but the name was later corrupted to Tajganj.
 - Shahjahan was present at Agra for the first death anniversary of Mumtaz.
 - There was a golden handrailing around the cenotaph of Mumtaz and this was later removed and replaced by the marble screen which we see today.

Evidence Ignored

- (11) Fanny Parks (1835) and H.G. Keene (1888) have confirmed that the Jawab was being used as a guest house. The rooms where they used to stay have now been blocked up. As the Mosque is identical with the Jawab, several rooms in it too are blocked up.

- (12) There has always been a cowstable in Taj Mahal. ASI even uses the Sanskrit word Gaushala.

Many such important pieces of evidence point to Hindu origin of Taj Mahal. But they have been persistently ignored by scholars for political reasons.

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Notes and corrected Bibliography of the article "Life and Death, Some Reflections on Yama in the Veda" by Dr. Lourens P. van den Bosch which was published in Itihas Patrika Vol.4, No.1

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NOTES

- See e.g. Boyce: 1975, p.92 sqq. and p.116 sq.
- See e.g. F. Max Muller: 1873 and 1882. For a criticism of his method see Evans-Pritchard: 1981, p.185 sqq.
- See for the other opinions formulated in the last century Macdonell: 1897, p.171 sqq. For Yama's connections with sun and moon see also Bhattacharji 1970, p.100 sq. and 104 sq.
- Dandekar: 1979, p.118 sqq.
- Arbman: 1927 (I) and 1928 (II). For an evaluation of the older positions with reference to the conceptions of the hereafter as reconstructed

by western scholars see Arbman: 1927, p.342 sqq.

6. See AV, 5.20; 8.1;8.2
7. The concept of Hell occurs, however, in RV. 7.104; see W.Norman Brown, The Rigvedic Equivalent for Hell, JAOS, vol.61 (1941), p.76 sqq.
8. See Schlerath, B., Der Hund bei den Indogermanen. Paideuma, vol.6 (1954) p.25 sqq.; Lincoln, B., The Hellhound, Journal of Indo-European Studies, vol. (197), p.273 sqq.
9. RV. 7.33.9,12.
10. R.V. 2-7 constitute the family 'books' RV. 1 and 10 belong to the 'books' which are most recently compiled.
11. See Geldner, RV. ubersetzt, 1951, vol.III, p.132.
12. In this respect I disagree with Bhattacharji: 1970, p.78. It does not seem plausible to me that the AV. originally would have been the scripture of the non-Vedic Aryans and the non-Aryan indigenous population. The suggestion that the cult of the Fathers was alien to the Vedic Aryans is not correct; it was originally a cult in which the priests not participated.
13. In fact the situation is much more complex. RV. 10.15.2 (AV.18.2.49), for instance, speaks of the Fathers as inhabiting the air, the earth and heaven. See also Macdonell: 1897, p.170.
14. So e.g. AV. 3.11.4; 7.53.2. See also Oldenberg: 1917, p.530.
15. Oldenberg: 1917, p.571 sqq. See also Keith: 1925, vol. II., p.626 sqq.
16. For a recent article on Nirrti see Joshi: 1977, p.149 sqq.
17. See O'Flaherty: 1981, p.56 sq. note 7.
18. See O'Flaherty: 1981, p.46 referring to Renou.
19. See van den Bosch, L.P., The Apri hymns of the Rgveda and their Interpretation, to be published in Indo-Iranian Journal 1984 a esp. par. 4.10.
20. RV. 1.162.19
21. See Oldenberg: 1917, p. 533 sq; Arbman: 1928, II, p. 230 sqq.
22. Cf. for the developments in the srautasutras e.g. ApSS. 31.1.1; BharPS. 1.1.1 : "The human oblation (pitṛmedha) is dearest to him (Agni)."
23. RV.1.38 5 See also Arbman: 1928, II, p.187 sqq.
24. Arbman, 1927, I, p.380 sqq.; 1928, II, p. 221 sqq.
25. For liminal see Turner : 1967, p.94 sqq.
26. Ludwig : 1889, p.46 sq.
27. See also Scherman: 1892, p. 146 sq.
28. The context of this stanza is problematic of Oldenberg: 1912-1914, p.210. It makes the impression to be a riddle.
29. Geldner: 1951, III, p. 132 sq.; Dandekar: 1979, p. 135.
30. Van den Bosch: 1984^b
31. Van den Bosch: 1984^b.

Ancient Indian Chitrashastra

(Sketching, drawing and Painting, etc.)

By S. B. Velankar

‘चित्रं हि सर्वशिल्पानां मुखं लोकस्य च प्रियम्’ ॥

‘यथा नृत्तं तथा चित्रं त्रैलोक्यानुकृतिः सदा’ ॥

Painting has a very old tradition in India and in Sanskrit literature. A number of Purana texts as well as Belles lettres refer to it in details and in glowing appreciation. The Buddhists and Jains also have contributed to this art-cum-science. All places, all temples were the repositories of this Art.

So far as styles are concerned, one classification was - 1. सत्यचित्र - Realistic; 2. वैष्णिक - Elongated, Elliptical, circular. 3. नाग्नर - With less ornamentation. 4. मिश्र - Mixed. In मानसोल्लास the classification is 1. विद्ध - as seen in a mirror, Reflection. 2. अविद्ध - Line drawing. 3. भावचित्र - showing emotions on the face. 4. रसाचित्र - drawn by liquid paints - not pastels or crayons; 5. धूलिचित्र - Rangoli; picture by powder. This classification is, however, not strictly logical since it takes different stands. Another classification is - (1) अधीचित्र or चित्राग्रस i.e. the front view (2) रसाचित्र and (3) धूलिचित्र. चित्रसूत्र (Adhyayas 35-43) of विष्णुधर्मोत्तरपुराण is a standard treatise on the subject.

This Science deals with the preparation of paints exhaustively and differentiates between short-lived and longterm paints. It also distinguishes the background on which Chitra is to be drawn according as it be a wall, a cloth, woodpiece, a stone or a metal. How to treat each background is meticulously detailed. Selecting a place is important; its surface is to be prepared; dimensions are to be meticulously measured; special characteristics of the subject are to be observed and their depiction is to be studied. First the sketch is to be drawn and then details are to be filled in. Only the face or the complete standing pose is required should be ascertained. The positioning of hair should be enquired - loosely flowing or directed to the right (or left) or wavy or parted etc.

Instructions are given about measurement proportions for various limbs of the human (Male/female) body. Brushes of various kinds and uses have been dealt with. Conventions have been stated about drawing the picture of Gods, Asuras, kings, Apsaras etc.

It is interesting to note that white colour had 22 varieties, Red 22, Green 4, Brown 5 and Black 3, in addition to 28 mixed colours.

The Main treatises are विष्णुधर्मोत्तरपुराण, अपरा-जितप्रश्न, मानसोल्लास (or अमिलपितायसिनामणि) by King Someshwar, शिल्परत्न, चित्रलक्षण by मगनाजित (only Tibetan Translation available) and other treatises on वास्तु and शिल्प. The aim of this art was to please, to decorate. We see specimens of this art in Ajanta, in Kaimur Range (M.P.), at Singanpur in Vindhya (Raigarh District of M.P.), Near Mirzapur

Kashi Khanda of Skanda Purana describes a Chitrapat. After Alexander's invasion, Greek Art influenced Indian paintings. Ajanta paintings have had a tremendous impact on Burma, Sri Lanka, China, Japan, Central Asia etc.

A treatise by Prof. B. S. Upadhyaya called **भारतीय विज्ञान की कहानी** is one of the Modern books which throws some light on this ancient Vidya dating from Vedic Times.

Indira Niwas
Avantikabai Gokhale Marg
Bombay 400 004

News in Brief/Press

India's great grammarian

PANINI was an unparalleled Indian grammarian, whose work, Ashtadhyai, is considered the base of the grammar of many world languages, Dr. S. D. Joshi, director of the Centre of Advanced Study, University of Pune, has said.

According to Dr. Joshi, Panini lived nearly seven centuries before Christ. The Chinese traveller, U En Sang, recorded his visit to Panini's native place in Shalatur, leading some to infer that Panini lived long before the Chinese traveller.

Dr. Joshi made these observations while speaking as the chief guest at a workshop on "Paninian grammar" held under the auspices of the Institute of Oriental Studies, Thane, in March 31, 1984.

Ashtadhyai, Panini's work on the grammar of Sanskrit comprises 4,000 sutras or cryptic rhymes. Very few words are used in the sutras, which are composed in such a way that they can be easily remembered for oral recitation. Ashtadhyai is divided into four cantos, and each has four chapters. Though Panini does not mention that he is dealing with the grammar of Sanskrit, this fact is obvious and indicates that the language was in vogue and spoken by the intelligentsia at that time.

Mr. S. B. Velankar, an eminent Sanskrit scholar, who conducted the workshop, observed that the sutras of Panini are commonly believed to be rather complex and difficult to understand but this was true only of a few, he said. The workshop aimed at dispelling such notions, he said.

Dr. S. G. Bahutkar, of the Tilak Maharashtra Vidyapeeth, Pune, described at great length, how Panini, in his works, was familiar with the whole of Bharat (India). He was aware of the social, political and historic developments of the country. Dr. Bahutkar mentioned that it was Lord Cunningham who proved that the native place of Panini, Shalatur, is the present-day city of Lahore. Dr. Bahutkar, however, cautioned that this did not mean that Panini was the first grammarian of Pakistan because he had spent a major portion of his life at Pataliputra. From the use of the word 'yawana' in Panini's text, it could be inferred that there was communication between the Bharatiyas and the Greeks even before Alexander invaded India.

Prof. Stephen Thompson, of the School of Oriental Studies, London, explained the use of "pratyaya" (suffixes) by Panini. He is now working on a thesis on grammar at the Pune University. According to Prof. Thompson "pratyaya" was a matter of belief ("shraddha") and conveyed a deep meaning. He traced the use of that word in the Upanishads and Nirukta and explained that Panini has described nine types of "pratyaya". To him, the more one thought about these uses, the more one has drawn towards the concept of ultimate realisation.

Earlier Dr. V. V. Bedekar, president of the Thane Institute, welcomed the speakers and the gathering. A documentary, "Marvel of Memory", depicting the manner in which the vedas were preserved by oral recitation for thousands of years, was screened. Rare works of Panini were also displayed and the March issue of "Itihas Patrika", a quarterly journal, was released. Mr. M. V. Gokhale proposed a vote of thanks.

Evening News 9/4/1984)

Files on Indian freedom fighters destroyed in UK

Two secret files of great historic value for researchers working on the lives and work of Indian revolutionaries and freedom fighters like Madam Bhikaji Cama, Veer Savarkar, Lala Hardayal, Govind Amin, MPT Acharya, VVS Iyer, Hemchandra Das, Subhas Chandra Bose, Ram Jivan Abbas, Varma and Rana have been destroyed in Britain.

The files were at the Indian Office Library and Records, now under the British Library. The library had at first said that the two files may not be available because they may have been withdrawn for being sensitive.

However, some time ago the library informed an Indian researcher that the files had probably been destroyed or lost several years ago.

The files were listed as Z/L/PS/7/35/1909 Dept. No. 1785 a (Subject: Information on Madam Cama, Rana, Savarkar, Hardayal, Govind Amin, VVS Iyer, MPT Acharya) and Z/L/PS/7/34/1908 Dept. No. 1155 a (Subject: Indian in USA: Movements of Hemchandra Das, Subhas Chandra Bose should be watched; Ram Jivan Abbas, Varma).

It was Mr Mukund Sonpatki who, while looking for material on the life of Veer Savarkar, found that among the secret files kept in the India Office Library these two files were noted to have been withdrawn from open records. The catalogue mentioned these files as "transferred to P and J (S)", the first file having been transferred on 24 February, 1924, and the second on 12 November 1924.

This was reported by Prof V S Godbole late last year in a newsletter he brings out from London. According to the newsletter Mr Sonpatki was initially informed that these files could not be seen as they were covered by the "75-year" rule, which bars scholars from consulting them. That was in 1978, when only 69 years had passed since the compilation of these files.

Mr Sonpatki applied again for seeing the files on completion of the required 75-year period and he was again refused permission to see these files.

When he applied in writing to the Deputy Archivist at the British Library, Mr Martin Moir, he was told that the files might have been destroyed some years ago. Mr. Moir said in a letter to Mr. Sonpatki that "although I am not absolutely sure that some of the material you are looking for is not amongst these P and J (S) files (including perhaps under a general title like "Bengal revolutionaries" etc.), I am inclined to think that the 1909 documents are not there and were probably destroyed or lost a good many years ago".

The India Office Library and Records has a large collection of books and official files of the East India Company and the India Office from about 1600 to 1947. The library houses more than 100,000 books on European languages and 250,000 books on Asian languages besides newspapers, prints, photographs, drawings, furniture and paintings. The Records section consists of 175,000 volumes and files.

Many of these files are of immense value for students of and researchers in modern Indian history. A majority of them are available to scholars as they are more than 30 years old, the period during which official files in archives cannot be seen or consulted under the British law. However, there are some files which are considered so sensitive that these are not made available to scholars even after the statutory period is over.

One of the files, among many, available earlier but withdrawn now is P and J (S), Box 77, 1927, 414, relating to the Government of India's ban on the "Canton Truth", of 1927.

('Patriot' 15/4/84)

Karnataka order on Sanskrit: leave for appeal refused

The Supreme Court has dismissed a group of special leave petitions from the State of Karnataka to appeal against a judgment of the Karnataka High Court quashing clause (4) of a G.O. dated July 27, 1982, by which Sanskrit was deleted from the list of first language (in primary and secondary schools) and included in the list for the study of two other languages by the students of eighth standard from the academic year 1982-83 itself.

Mr. Justice A. Veradarajan and Mr. Justice M. P. Thakkar were on the Bench.

Several affected students of eighth standard in Karnataka and others filed writ petitions in the High Court against the impugned order by which Kannada was made the sole first language and Sanskrit included in the list for the study of two other languages in primary and secondary schools. By this order, the embargo (placed by an earlier G.O. dated April 30, 1982) on Sanskrit as first language or as composite first language still 1987-88 (for study by the students of eighth standard from 1982-83) was continued. (The language pattern prescribed in the G.O. will come into effect from 1987-88).

Violation: The High Court allowed the petitions in part and quashed clause (4) of the G.O. on the ground that the ban imposed on the students had no nexus to the object of the impugned order and that "it is ex-facie arbitrary and violative of Article 14 of the Constitution" (equally before law etc.).

The purpose of the impugned order, the High Court noted, was that Kannada should be studied at all levels and by all students up to a higher secondary stage. The purpose was also to give primacy to Kannada at the secondary level from 1987-88. Consequently, Sanskrit and other languages were included in the list out of which students were required to study two other languages.

While quashing clause (4) of the G.O. the High Court observed that clause (4) "does not prohibit students of the eighth standard from taking composite first language with Arabic and Persian" and "the restraint is only as to Sanskrit" and "it is, therefore, a petent instance of hostile discrimination and perhaps, the most baffling in law and logic".

(Hindu 8/5/84)

"The educational policy of the government trains men into docile tools of an external authority, it does not help them to become self-respecting citizens of a free nation. Love of one's native land is the basis of all progress. This principle is recognised in all countries. But in our unfortunate country it is the other way. A conquered race feels its heart sink. It loses hope, courage and confidence. Our political subjection carries with it the suggestion that we cannot consider ourselves the equals of free nations. Indian history is taught to impress on us the one lesson that 'India has failed'. The worst form of bondage is that of despair and dejection, which creeps on defeated peoples, breeding in them loss of faith in themselves. The aim of true education should be to keep alive the spark of national pride and self-respect. If we lose our wealth and resources we may recover them tomorrow, if not today; but if we lose our national consciousness, there is no hope for us."

Dr. S. Radhakrishnan, The Modern Review, Calcutta May, 1927.

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Editorial

The Sixth World Sanskrit Conference will be held at Philadelphia U.S.A. during 13th to 20th Oct., 1984. The Conference has been jointly organised by The Council of Sanskrit and Related Studies of the American Oriental Society, The Department of the South Asia Regional Studies of the University of Pennsylvania and the International Association of Sanskrit Studies. All these World bodies deserve congratulations. The Institute for Oriental Study, Thane, India, a organisation devoted to oriental and Sanskrit studies has organised a Study tour for Sanskrit Scholars and lovers desirous of attending this Conference from India. The Institute has offered 50% financial assistance of the tour-cost to promote Sanskrit Studies and exchange of knowledge. This may be the first Scheme of it's kind ever offered to Sanskritists in India. It is an attempt to give equal Social Status to Sanskrit studies as other popular sciences like Medicine, engineering and electronics. About twenty Scholars will avail of this opportunity. The Institute deserves congratulations for their efforts. Pre-tour arrangements and the process of procurement of documents like Passport, Visas, foreign exchange etc. is an agonising experience. The earlier century travellers were very lucky and could perform better in the exchange and spread of knowledge, from one country to other, certainly because they never had to undergo passport and visa formalities, the problem of ever increasing dollar and the threat of hijacking. As we are expanding in our Scientific knowledge we are shrinking in values and faith, among human-beings.

Though in India Universities and Government policies are getting detrimental to Sanskrit Study still Sanskrit learning is gaining popularity and respect, in almost all parts of the world, more so in, developed countries.

The Western World, leaders in the technological and Scientific achievements, today, are living in a different psychological set up and atmosphere. The impact of present Scientific achievements cannot be denied which are based on acceptance of the Cartesian view, as absolute truth and of 'Descartes' method as the only valid way to knowledge. Descartes distinguished truth from error in all fields of learning, and asserted that "all Science is certain evident knowledge. We started rejecting every knowledge which is merely probable, and decided that only those things should be believed which are perfectly known and about which there can be no doubts. It will be worth quoting Fritjo Capra who writes in his book the Turning point (P. 42). "The belief in the certainty of scientific knowledge lies at the very basis of Cartesian philosophy and of the world view derived from it, and it was here, at the very outset, that Descartes went wrong. Twentieth-century physics has shown us very forcefully that there is no absolute truth in science, that all our concepts and theories are limited and approximate. The Cartesian belief in scientific truth is still widespread today and is reflected in the scientism that has become typical of our Western culture. Many people in our society, scientists as well as non-scientists, are convinced that the scientific method is the only valid way of understanding the Universe. Descartes' method of thought and his views of nature have influenced

all branches of modern science and can still be very useful today. But they will be useful only if their limitations are recognised."

The crux of Descarte's method is radical doubt. This typical approach which is applied from Mathematics to Child psychology is the nucleus of Western research and culture. Indian Scholars and Scientists hypnotised by Western Achievements' during the last two centuries have blindly adopted these views and methods, as a key to all success and problems of human life. Study of Sanskrit is no exception to this. It's study on the basis of academic and linguistic lines only may not help us to understand or interpret the Society, the culture and the life of those people who lived in this culture. Knowledge of sanskrit is the window through which we can peep in and see the heights and depths of achievements in all branches of human life from spiritual to material which people of The Indian Sub-continent lived for ages.

What we need is a synthesis of the entire available knowledge to accurately evaluate the qualities of life, the wisdom of the people the values in society to which the entire mass of contemporary literature bears testimony to.

Let each branch, each section wrangle over a syllable, if they like; but let us have a mature body of interpreters who are able to visualise the Society as a whole, the life it led, the comforts it sought, the wisdom it possessed, the constraints and the privileges it enjoyed, the happiness it brought to the every day life. Let us be told by the comprehenders of the aspirations and inspirations, the desires and pursuits, the habits and customs as a whole, of the people.

Can we hope that deliberations of such conferences will help to create cosmos out of chaos, to display order out of the jumble. To pray and to hope is the recourse left to us :

A Bird's eye view of the history of Indology, with special reference to the situation in the Netherlands

By Dr. Lourens P. Van den Bosch

The scientific study of the languages, literatures and civilizations of India, shortly called Indology, started at the end of the eighteenth century during the period of the Aufklärung (Enlightenment). Charles Wilkens (1749-1836) and William Jones (1746-1794), both working in Calcutta, were the first Europeans who rendered important Sanskrit texts direct into English on account of their acquired knowledge of this language. Basham (1967, 5) calls them the fathers of Indology. It was by means of their unwearying activities that Sanskrit literature became known in Europe. The academic instruction of Indology at the European universities started in the beginning of the nineteenth century. France was the first European country where Sanskrit was taught. Alexander Hamilton (1762-1824), one of the founding members of the Asiatic Society of Bengal, became in 1803 teacher of Sanskrit at the Ecole des Langues Orientales Vivantes at Paris. In the same town the first university chair of Sanskrit was founded at the famous College de France in 1814. Eugène Burnouf (1801-1852) laid the foundation for the scientific study of the Vedas in his Parisian lectures; see Gonda: 1960, 1. In imitation of this, many other respectable universities set up professorships for the study of Sanskrit and the Indian civilization in the first half of the nineteenth century. The time had become ripe for a scientific approach of the study of Indian culture.

The development traced above cannot be understood very well if one does not review the factors which have contributed to this expansion, for in the two preceding centuries the interest of the well-educated public was evoked by publications about the wonderful Orient, of which India was a part. The discovery of important Oriental civilizations led in the period of the Aufklärung towards a critical attitude with respect to the Christian civilization and its presuppositions. Man was no longer dependent on Christian revelation, but an autonomous being, able to find the Truth himself. The development of this critical attitude created a distance which was fruitful for a scientific approach of other cultures. To say this does not exclude the fact that there had been an interest in Oriental studies during several centuries, but this was mainly limited to the study of Hebrew and some related semitic languages (e.g. Aramaic), for important parts of the Bible, the Holy Writ of the Christians, were written in them. Hebrew was regarded as the language of Revelation in the beginning and from this language all other tongues were derived. It is needless to say that this idea is rendered out of date since a long time, but it is interesting to notice that one tried to place the new discovered languages within a frame of reference which was derived from Christian theology. The own culture was the standard for the appreciation of other ones.

The knowledge about the Indian subcontinent

in the western world has ancient roots and goes back on authors of classical antiquity. Herodotus, Ctesias and Megasthenes, for instance, give information about the country in their books; see Wittkower: 1942, 159 sqq. However, from the beginning onwards myth and reality were closely intertwined and in the course of time a fantastic image was created about distant peoples and fabulous beings. The direct communication between India and the West was first restored in the thirteenth century, when the Venetian traveller Marco Polo visited India and the Far East between 1271 and 1295. After his return to Italy he wrote a book about his voyage in the east, which aroused the interest in the manners and institutions of the distant peoples of Asia; see Yule: 1903, 19 sqq. His description of these peoples did not bring about a noticeable change of attitudes, because the new knowledge was wrapped by him in age-old stereotypes. Mitter (1977, 7 sq.) remarks in this context that "the century-old myths about fabulous creatures and strange peoples had created a precarious balance between the phantasy and truth in the mind of these travellers. It was in this credulous state of mind that they visited India, so that their reports consisted of a curious mixture of observation and fabulous tradition". Wittkower (1942, 195) has made the following analysis of the mentality of these medieval travellers: "These men went out to distant regions with preconceived idea of what they would find.....their imagination was fed from childhood with stories of marvels and miracles which they found, because they believed them".

During the Middle Ages the image of India was obscured by the abundant phantasy of the previous period, as may be clear from the statements mentioned above. This obstructed the reconstruction of a more truthful picture. Influential medieval works such as, for instance, the Marvels of the East, fed the unbridled imagination of the European peoples. They created the frames of reference, in which the facts were placed and gave them the bright colours of fairy tales. The famous book of travels of Ludovico de Varthema from Bologna in Italy may be used as an example. It was published in Rome in 1510 under the title Itinerario de Varthema Bolognese; see Jones 1843. The author had travelled in the south of India between 1503 and 1508. He gives a description of the religious customs of the areas he has visited. In that context he makes mention of his encounter with the king of Calicut at the Coromandel coast. According to Varthema the king believed in God, but he also paid respect to the devil, known as Deumo. The author gives a description of an image of this Deumo which he has seen in the royal chapel.

"In the midst of the chapel there is a devil made of metal, placed in a seat also made of metal. The said devil has a crown made like that of the papal kingdom, with three crowns; it has also four horns and four teeth

with a very large mouth, nose and most terrible eyes. The hands are made like those of a flesh-hook and the feet like those of a cock; so that he is a fearful object to behold. All the pictures around the said chapel are those of devils, and on each side of it there is a Sathanas seated in a seat, which seat is placed in a flame of fire, wherein are a great mass of souls, of the length of half a finger and a finger of the hand. And the said Sathanas holds a soul in his mouth with the right hand, and with the other seizes a soul by the waist."

Transl. Jones: 1843, 127 ff.

Mitter (1977, 17 sq.) has difficulties with the interpretation of this description. She is of the opinion that Varthema refers to the traditional local folk deities, which might have been situated in the chapel of the king and represented as devils in accordance with the medieval tradition. In this context she states that the description of Sathanas surrounded by devils of hell owes a great deal more to medieval European hell imagery than to Indian tradition. I am not sure whether this statement is correct, because Indian tradition also has a rich imagination with reference to life in hell. There are many descriptions of the god of Death and his henchmen, who catch the souls of the deceased and bring them to this god, who functions as a judge of the dead. The Madras Government Museum has a *yamapaṭaka*, a painted scroll with the horrors of hell, which to all probability dates from the seventeenth century; see Van Bosch: 1982, 36 sqq. with illustration IV. In the medieval Hindu treatises, especially in *purāṇas*, a rich iconography with reference to Yama, the judge of the dead, and his servants can be found. Varthema's description of the interior of the king's chapel reminds in some respects of the Yama tableaux of the Indian literature. It is not impossible that Varthema has seen these *yamapaṭakas*, but it remains unclear why these representations are painted in the royal chapel. Nonetheless, it does not seem improbable to me that Varthema uses images which are derived from European tradition, when he represents the things he has seen. The representation of Lucifer in Hell by Taddeo di Bartolo painted in 1396 in San Gimignano (Siena) has many striking similarities, but also the famous painting of the last judgement on the Campo Santo in Pisa by the Maestro del Trionfo della Morte (1360-1370) shows Satan seated on a throne in the midst of the fire with two horns and four devouring the miserable souls of the deceased. As such, the Indian scenery of the last judgement with Yama as the horrible judge of the dead, who punishes the sinners, might have been translated by Varthema with the help of the vivid and bright pictures of hell, which were so popular in medieval times. According to Mitter (1977, 18) there are indications that the author may have had in mind Dante's *Inferno*, from his *Divina Comedia* when he compares the crown of Sathanas with the papal triple crown, also worn by the popes in hell, but I am not sure whether this is correct, because Yama is often represented with a crown which is similar to that of the pope; see Van den Bosch: 1982, p. 54 sqq. with ill.

It becomes, however, clear that the whole scheme, in which Varthema deals with Indian religions, is a European one. God and Satan are the antipoles

of each other in this world and mankind is a tool in their fight. With the help of Christ and the church man can resist the seductions of Satan and be saved from eternal damnation. God and Satan are found back in Varthema's description of the South Indian religion. The king of Calicut believed in God which is called Tamerlani, a lofty ultimate being, but at the same time he is guilty of adoring the devil, known as Deumo. It will be clear that this dualistic frame of reference is not fit for a correct understanding of a complex and multileveled religion as Hinduism.

Varthema's itinerary was a great success and had a long-lasting influence. In 1515 a German edition with wood-cut illustrations from the famous German artist Jorg Breu, who lived from 1480-1537; see Hallstein: 1954, 157 and 177; Lach: 1970, 78 sqq. Illustration 1, shows the idol of Calicut in Varthema's German edition of the *Itinerario*. Hundred and fifty years later the German Jesuit Athanasius Kircher, the head of the Jesuit centre of learning in Rome, wrote a book on comparative mythology, in which he frequently quoted Varthema as his most important source for the description of Hinduism, though it had been rendered out of date at that time by more recent publications. The book was published in Amsterdam in 1667 and called *China Monumentis qua Sacris qua Profanis...Illustrate*; for a short description and evaluation of it see Mitter: 1977, 55 sq.

A new stage in the relations between Europe and India started with the coming of the Portuguese to India. They arrived by sea in 1497 with Vasco da Gama and were especially interested in spices, the traditional business concern of the Arabians, but they also pretended to have more noble purposes. They were seeking a special group of Christians, who were said to be the subjects of the mysterious Prester John. In 1510 they captured Goa under the leadership of Alfonso de Albuquerque, the Captain General, from the Muslim rulers of Bijapur and made this place the capital of the Portuguese eastern empire; see Spear: 1971, 62. In their train the Jesuits arrived, among whom Franciscus Xavierius is one of the most important. In their endeavour to convert the native population to the Christian religion it became a first requisite to get a better understanding of the traditional religion. So the early Jesuit missionaries started to collect religious materials with the purpose to get a better understanding and to refute the ideas behind them. They clearly wanted to prove the superiority of Christianity in front of the Hindus. In those early colonial times Jesuit missionaries visited many places and wrote reports about temples and religious customs for their superiors. Many of them disappeared in archives of monastic orders. The Jesuite historian G.P. Maffei published in 1588 a book about the history of the Jesuit mission in India. It is called *Historiarum Indicarum Libri XVI* and edited in Florence (Italy). It gives a good impression of the activities of the Jesuits in those days in India.

The greater familiarity of the missionaries with the Pagan, in this case Hindu culture, gradually changed their attitude towards it, but their were clear-cut limits. The description of the pagan culture with its 'superstitions and abuse practices' should be conducive to the lofty task of the christianization of the indigenous population. This made

them in the eyes of the Portuguese, trustable allies against other native foes. However, one can not speak about a systematic reflection of the missionaries on the presuppositions, which form the basis for a correct understanding of the Hindu religion from the native's point of view. The Jesuits were too much convinced of their own superiority to place themselves in the position of the Hindus. The first attempt to such an approach was done in the beginning of the seventeenth century by the well-known and controversial Jesuit Roberto de Nobili. In 1605 he left Europe and arrived in Madurai in the south of India and lived there as a brahmin. He learnt Sanskrit, made a study of the religious, philosophical traditions of Hinduism and accommodated himself outwardly to the traditional customs. However, his ultimate purpose was to bring a form of Christianity which was adapted to the Indian tradition, without denying the special characteristics of Christian faith. He directed himself in the first place to the brahminical class, because he thought that the christianization of

the mass of the population would be much easier, when he had convinced their religious leaders. His behaviour to accommodate himself to the customs of the brahmins aroused a storm of protest among his fellow Jesuits, but also among other monastic orders, such as e.g. the Dominicans and the Franciscans. These opponents were of the opinion that this practice, which is called in the ecclesiastical literature the *ritus malabaricus*, was totally contrary to the Christian message; see Richter: 1924, 64 sqq.

The Portuguese missionaries collected in the sixteenth and seventeenth century much materials about the Indian religions. Most of their descriptions disappeared in the archives of the monasteries and were relegated to oblivion. Some, however, were found back. Caland and Fokker (1916) translated three ancient Portuguese treatises on Hinduism. It also happened that the Portuguese Jesuits were quoted or plagiarized by later authors, a practice which frequently occurred in those days.

The first Dutch author who wrote about India was Jan Huygen van Linschoten. He was born in Enkhuizen and he became in 1583 the secretary of the new archbishop of Goa, the Dominican Vincente da Fonseca. Both travelled by boat to Goa. Van Linschoten travelled back to Portugal in 1592. He wrote his travelling experiences down in an itinerary. The complete title is *Itinerario, voyage ofte schipvaert van Jan Huygen Van Linschoten naer Oost ofte Portugaels Indien 1579-1592*. The book was edited in 1596 and contained engravings by Joannes and Baptista a Doetichum. Van Linschoten gives an extensive report of his journey, but the main portion of his book is devoted to India. It contains reports based on his own observation, but also on information of other persons. However, also printed sources of others he used. For the description of flora and fauna, Van Linschoten uses Garcia da Orta's book *Coloquios dos simplosm, e drogas he cousas medicinaes da India*, published in 1563. This author, the court physician of the Portuguese Viceroy of Goa, had collected many information on medicinal plants and trees; see Terpstra: 1955, Inleiding LV. Van Linschoten does not give a systematic description of Hinduism, but he relates the things he has seen and heard. Chapter 36 deals, among others, with the custom

of widow-burning. This practice was so strange that it is already mentioned in the earliest descriptions on India; cf. Kunstmann 1863. In chapter 44 Van Linschoten makes mention of one of his trips to a village five or six miles inland from the coast. With his friends he visits one of the temples and there he sees a painted image of one of the Indian gods. In accordance with the earlier traditions the author describes it as monster which looked like the devil:

"It was such an ugly figure, somishaped and deformed, that more monstrous was never seen, for it had many horns, and long teeth that hung out of his mouth down to the knees, and beneath his navel and belly it had another such like face, with many horns and tusks..... Upon the head thereof stood a (triple crown) myter, not much unlike the Pope's triple crown, so that in effect it seemed (to be the monster described) in the 'Apocalips'."

Trans. Burnell: 1885, 300.

The stereotype description of this Indian god clearly reminds of Varthema's description. It has the appearance of Satanas, but it is here connected with the Apocalypse. The fresco of Lucifer painted by Taddeo di Bartolo in 1396 in the duomo of San Gimignano (Italy) also has beneath the navel a face with an ugly mouth, with which the souls of the miserable deceased are devoured. Baptista a Doetichum represented this god in his engraving on Indian temples, religious idols and customs. In this synoptic picture on non-Christian religions also a representation of a mosque (*mesquita*) is found; see Mitter 1977, 21 sqq. It will be clear that Van Linschoten is so prejudiced by his own catholic religion that he only can see Hinduism and Islam as false religions, which are instituted by the devil; see the end of chapter 44.

Though Van Linschoten's Itinerary is not of primary importance for the description of Hinduism it contains valuable information of many aspects of life of the countries he visited. As such, it stimulated the Dutch merchants to orientate themselves upon the new countries in the East. In 1602 the Dutch East Indian Company, the V.O.C. was founded to promote the trade with these countries. In their efforts to capture the market of spices the Dutch merchants fell foul of the Portuguese with the result that many conflicts arose between the Dutch and the Portuguese in these areas. The foundation of trading-posts on the south coast of India led to more lasting contacts between the Dutch and the native population. By this contact the Dutch became fascinated by the wonders of India, by its remarkable institutions, its history and mythology, by the variety of its religions, by its beliefs, forms of worship, rites, ceremonies and festivals.

Two Dutch clergymen, who were in the service of the V.O.C., wrote in the seventeenth century important books about India which caught the attention of the educated public of those days. The first one, Abraham Rogerius, lived for seventeen years (1630-1647) in Paliacatta (Coromandel Coast), not far from Madras. He was a keen observer and not biased too much by the ancient stereotypes. He came to know a brahmin fugitive from Goa,

called Padmanava (Padmanābha), who communicated to him the main ideas of Hinduism by drawing upon the religious literature. His second informant is a certain Damersa. Rogerius communicated with them in Portuguese. The outcome of their cooperation is a book published by Rogerius in 1651 under the title *De Open-deure tot het Verborgen Heydendom*; of. Caland 1915. Though Rogerius was convinced of the superiority of his own religion he did not want to denigrate Hinduism in the usual sixteenth century manner. He was convinced that it was necessary to study Hinduism by actually offering theological arguments. The pagan peoples were not totally ignorant of Revelation, but God had allowed them some share in His divine knowledge. This kind of argumentation was also necessary to get permission for the publication of the book. The book is subdivided in two main sections. The first one is devoted to the four varnas, to the brahmins, their rights, privileges and special social position in the social hierarchy. Many customs of the brahmins are extensively discussed, such as, for instance, the marriage and funeral rites. A special chapter is devoted to the suttee. The second section contains the special theological issues of Hinduism. It includes an account of the cosmological system, Hindu ideas about God, the Creation, the four ages of the world and the final dissolution. Though the structure of the second part of the book is determined by Rogerius own theological ideas, he gives a detailed description of the two principal gods, Viṣṇu and Śiva, and their wives and children. Moreover, the vāhanas of the gods were not neglected, nor the minor deities. Nonetheless, the author clearly felt the need to identify the devil, because it fitted in his own theological scheme. Both Gangā and Gournātha were indicated as the most important devils. It will be clear that Rogerius preoccupation with his own scheme led to a misunderstanding of these deities.

Besides the belief-conceptions, Rogerius also showed a vivid interest in the actual forms of worship and looked after their interrelations with mythology and theology. This brought him to an extensive description of the temples of Viṣṇu and Śiva. He makes mention of the most important temples in the south of India. The god Brahma would not have been honoured in temples according to him. Moreover, he relates, of many religious rituals. Rogerius is one of the first authors who gives an account of the main iconographical features of the Hindu temples including the main images found in them.

Notwithstanding the inaccuracies and other shortcomings, "*De Open Deure (The Open Door)*" is not only remarkably objective in his descriptions and reflects a certain fairness, but it is in general free from the missionary fanaticism or contempt for Hindu religion and literature evident in Jesuit accounts", as Mitter (1977, 52) remarks. With the help of his two brahminical informants, Padmanābha and Damersa Rogerius tried to offer his European readers a coherent account of Hinduism and its main sources. Though the first informant said to base himself upon the Vedas, the contents of his information is more in harmony with the Tamil Vaiṣṇava hymns, which profess to give the contents of the Vedas, than with the real subject matter of these ancient texts; see Caland 1915, Introduction XXIV. In addition to his own discourse Rogerius offers a translation of Bartrhari's stanzas which deal with the path to heaven. Padmanābha rendered it into Portuguese and Rogerius translated it into Dutch. It was the first Sanskrit text translated in a European language.

After the edition of *De Open Deur* in 1651 in Leyden, it was translated in the German language in 1663 in Nurnberg and in the French language in 1670 in Amsterdam. During a long time, Rogerius's book was the most complete account of South-Indian Hinduism; cf. Burnell: 1898, 98.

Philippus Baldaeus was the second Dutch author who published a book on Hinduism in the seventeenth century. It has a very long Dutch title: "Nauwkeurige en waarachtige ontdekking en wederlegginge van de Afgoderye der Oost-Indische Heydenen....." The English title of the book, translated in London 1703, runs as follows: "A True and Exact Description of the most celebrated East India coast of Malabar and Coromandel ... Ceylon (including descriptions of pagan temples, manners, ceremonies) ... Also a most Circumstantial and Complete Account of the Idolatry of the Pagans of the East Indies, the Malabars, Benjans, Gentives, Brahmins etc. Taken partly from their own Vedam(Vedas)and Authentic manuscripts, partly from frequent Conversations with Priests and Divines, with the Draughts of the Idols, done after their Originals." The English title deviates in some respects from the Dutch one, but the program of the author becomes clear at once. Baldaus came as a clergyman and servant of the Dutch East Indian Company (V.O.C.) to Jaffna in 1658 after the victory of the Dutch over the Portuguese. He received a careful schooling in the service of the V.O.C. and

Dr. Lourens P. van den Bosch during his recent visit to India in the beginning of this year (Jan. 1984) was invited as guest of honour to the Foundation day ceremony of Institute for Oriental Study, Thane, India (15th Jan. 1984). He delivered a illustrious speech on the study and development of Indology in Netherlands. Function was attended by a large number of individuals from all walks of Life. All felt surprised by the amount of study carried out in Netherlands about Sanskrit language and Indian Culture during last Century. This not only has provided valuable information to us but has brought two countries closer in exchange of knowledge and culture.

studied among others the Malayan language. He was sent to Batavia (Jakarta) in 1655 and from there to Ceylon. He participated in the campaigns of the formidable Rijckl of van Goens. He was present at the conquests of Jaffanapatnam and Negapatnam in 1658, by this general. When Jaffanapatnam in 1658 is conquered he saw that the Dominicans, Franciscans and Jesuits left the city and their seminary. It is without doubt that Baldaeus must have found in this city many data which were collected by the Portuguese; see also Pott: 1962, 57). These data on Hinduism proved to be very useful for the author. He incorporated the works of the Portuguese missionaries and amplified them with his own insight. From Ceylon he made several trips to the south coast of India and was even some time a prisoner in the Rameśvara temple. In 1666 Baldaeus came back to Holland and wrote his book, which was published in Amsterdam in 1672. He gave a detailed description of the mythology of Hinduism and tried to refute the religious ideas of the Hindus, as was frequently done in those days. His work is a useful supplement to the book of Rogerius. Unlike this author, who based himself on personal observation and informants, Baldaeus used for his work to all probability textual traditions from various regions. According to the Jong (1917, Introduction LXXXIV) his description of the avatāras of Viṣṇu shows many similarities with the various passages from the Purāṇas, the Mahābhārata and the Rāmāyana. With the help of his sources Baldaeus related the many Indian stories to the best of his knowledge. He was the first who narrated the legends of Kṛṣṇa to the educated public of his days.

Because the book of Baldaeus had many literal agreements with the work of the Portuguese author Fariay Sousa, Asia Portuguesa (1666-1675) (translation Stevens: 1694-1695), scholars have looked for a common source, which is used by both. According to Charpentier (1912-1923, 731 sqq.) this common source may have been father Jacopo Fenicio, a Portuguese Jesuit, who wrote his treatise on Hinduism, Seita dos Indios orientais, before 1609; see also Mitter 1977, 57 sq. with note 277. Baldaeus used a Dutch translation of this text in all probability translated by a certain Philippus Angel without mentioning the original author, the Jesuit Jacopo Fenicio. His treatise about the cosmological and mythological system of the Hindus, which was based on the Purāṇas, formed the central part of Baldaeus' book. As such, the accurate and authentic information, characteristic of this period, is more the work of Fenicio, than of Baldaeus.

The book of Baldaeus is illustrated with many engravings on mythological subjects, such as, for instance, the ten incarnations of Viṣṇu. Moreover, a sixteen armed image of Śiva is represented. Similar illustrations are also found in other publications of that period, such as in Fariay Sousa's Asia Portuguesa (1666), Kircher's China illustrata, and Dapper's Asia (1672). All these books may have used a common source with representations, which their illustrators used at their discretion. What becomes clear from this engravings is that the Indian gods were not any longer regarded as monsters or devils. They acquired Indian traits, though the whole scene often had a European setting.

This cannot be the place to deal with the other authors of the seventeenth and eighteenth century, who wrote about India.

knowledge about the Indian civilization. Rogerius and Baldaeus (resp. Jacopo Fenicio), however, were the two most important authors on south-Indian Hinduism. Only the treatises of the Danish missionary Barthelomius Ziegenbalg, who lived from 1706-1719 in Trancebar (Coromandel coast), came to the level of the other two. Because his religious superiors were not interested in his descriptions of Hinduism, his treatises remained unpublished. W. Germann edited in 1867 the Genealogie der Malabarischen Götter (Genealogy of the Malabar Gods), which was written by Ziegenbalg in 1713. The other manuscript, the Ausführliche Beschreibung des Malabarischen Heydenthums, is still unpublished; see Caland: 1924, 73 sqq.

As may be clear, the two Dutch books mentioned above were among the sources of first-hand knowledge about India and did not fail to attract the attention of many prominent scientists, philosophers and other educated readers. They exerted an enormous influence on the intellectual élite of the last five decades of the seventeenth century and the next one. This élite woke up to the fact that there were more types of human civilization than the only known European variety. It became evident that the religion and philosophy of the Indians contained elements of outstanding value for humanity in general; see Gonda: 1964. Moreover, it contributed to a critical attitude with respect to their own religious conceptions and beliefs. These itineraries and accounts of foreign religions contributed much to the European period of the Aufklärung (Enlightenment) in the second half of the eighteenth century, which in its turn was one of the factors influencing the great Indian reformers of the nineteenth century, such as, for example, Rammohan Roy. When therefore famous scholars as William Jones and Charles Wilkins inaugurated the study of Sanskrit at the end of the eighteenth century in Calcutta and translated the first Sanskrit texts into English, the educated public had been made receptive to the idea that the knowledge of Indian languages and civilization would be of greatest importance for a correct understanding of the history of mankind. It was this insight that led in the beginning of the nineteenth century to the foundation of academic chairs for the study of Sanskrit and Indology, as I have mentioned before. Though France was the first European country where Sanskrit was taught, the larger German universities had an important part in the development of the study. In 1816 the German Franz Bopp succeeded in the reconstruction of the common ancestor of Sanskrit and the classical languages of Europe. He became the founder of the comparative philology, which became in the course of time an independent science. In England Sanskrit was first taught at the training college of the English East India Company at Hertford. The earliest English chair was the Boden Professorship at Oxford, first filled in 1832, when it was conferred upon H.H. Wilson, who had been an important member of the Asiatic Society of Bengal. Chairs were afterwards created in London, Cambridge and Edinburgh.

In Holland the academic study of Sanskrit had a slow start. It was not possible before the sixties of the last century. In 1865 Hendrik Kern, after a stay in India, was appointed to be the first professor of Sanskrit at the State University of Leiden. He was also productive in the field of Indo-European linguistics and the Indonesian language.

ages. These languages were especially important for the civil servants working in Indonesia, a former Dutch colony. He is described by Gonda (1964) "as a man of sound scholarship and an enormous mental energy, who in those days could teach subjects nowadays entrusted to four or five professors". His scientific production was of an impressive quantity, as may be clear from his collected work. He edited and translated many texts, among others, some work of Varāhamihira, and also found time to contribute to the great Petrograd Dictionary. The edition of this dictionary belongs to all probability to the greatest achievements of Indological scholarship of the nineteenth century. It was produced by two German scholars, Otto Bothlingk and Rudolf Roth and published in parts by the Imperial Academy of Sciences of Russia from 1852-1875. Kern was succeeded in Leiden by Speyer. He was not only an expert in Indian Buddhism and Indian philosophy, but also in the field of linguistics, as may be clear from his famous Sanskrit grammar and Vedic and Sanskrit syntax.

Though the study of non-western languages and cultures always has been a speciality of the State University of Leiden, the other State Universities also created chairs for the study of Sanskrit and Indian culture. In Utrecht the first professorship for Sanskrit was conferred upon W. Caland in 1901. He was a Vedic scholar of world fame, a careful philologist and a sharp-witted investigator. Unfortunately many of his publications are written in the German language and therefore not very accessible to those scholars who have no knowledge of German. This cannot be the place to deal with all his publications. I mention in this context his impressive study on the funeral customs, described with the help of the ancient Indian texts: "Die Altindischen Todten- und Bestattungsgebräuche, mit Benutzung handschriftlicher Quellen dargestellt", Royal Academy 1896, A.L., N.R.I. 6. Caland also contributed to the study of the literature and ritual of the Atharvaveda. Important parts of the very difficult Kausika Sutra (khaṇḍika 7- 52) were translated and interpreted by him in his "Altindisches Zauberritual, Probe einer Übersetzung der wichtigsten Theile des Kauṣika Sūtra", Royal Academy 1900, A.L., N.R. III, 2. Moreover many other important Vedic texts were edited and translated by him. He published a critical edition of the Baudhāyana Śrautasūtra, the most detailed ritual handbook of the Black Yajurveda, in the Bibliotheca Indica Series, Calcutta 1904-1913. After this work he made an annotated translation of the Āpastamba Śrautasūtra, "Das Śrautasūtra des Āpastamba aus dem Skt. übersetzt", Leipzig-Amsterdam 1921-1928. In the late half of the twenties Caland started to publish in English. He edited and translated the Vaikhāṇasāsmartasūtra in the Bibliotheca Indica Series, Calcutta 1927-1929. Caland's Magnum Opus in the field of the Sāmaveda is his English translation of the Pañcaviṃśa-Brāhmaṇa, described by P. Dumont as "a remarkable example of patient erudition and conscientious scholarship". It was published in the Bibl. Ind., Calcutta 1931. In the special field of the ancient Vedic ritual Caland was an unsurpassed master. He made the results of the then nascent comparative study of religion and anthropology subservient to a better understanding of the ancient religions of India. Caland was not only an excellent scholar, but also a good teacher. He attracted many pupils who wrote a thesis under his supervision. At the end of his life, he counted

among his disciples, young Indian scholars. Raghu Vira, the founder of the International Academy of Indian Culture, wrote a thesis for him, "Vārāha Grhya Sūtra, with short extracts from the paddhatis of Gaṅgādhara and Vasiṣṭha". After Caland's death in 1932 Raghu Vira could complete many of the works of Caland. By his publications and other activities Caland made the academic chair for Sanskrit of the state university of Utrecht well known in the world of Sanskrit scholars. He had in professor Gonda, a worthy successor. N. Fukushima (1932-1933) has edited a bibliography of Caland; see also Vogel 1932-33.

While Sanskrit studies in Utrecht especially became concentrated upon Vedic texts and ancient religions of India, other aspects of Indian culture were elucidated by Speyer's successor in Leyden, Dr. J. Ph. Vogel. He was a meritorious archeologist, who combined the study of monuments and the interpretation of texts.

In the first four decades the study of Sanskrit and Indian culture was mainly concentrated in the universities of Leyden and Utrecht, but there was also some knowledge of Sanskrit in other universities. In Groningen, for instance, Dr. P.N.I. Harting, who as first in Holland had written a thesis in English on a Sanskrit subject under the supervision of prof. Caland (Selections from the Baudhāyana-grhyaparīśistasūtra) became professor in the English language and literature in the second half of the twenties.

After the second world-war the situation at the Dutch universities gradually changed. With the prosperity of economic life more money became available for academic teaching and research. The number of students assumed in the sixties enormous proportions. This development also led to the creation of more academic chairs and other professional places for Indological studies. New departments for Indological studies were instituted at the universities of Amsterdam and Groningen. With this allocation of places to Indological studies, a differentiation took place. In addition to the old Indian languages the attention was focused upon the middle Indian and new Indian languages. Moreover, chairs were founded for the study of South and Southeast Asian archeology and art. In the university of Leyden the last mentioned subjects were taught by prof. F.D.K. Bosch, the author of a well-known book on Indian symbolism, "The Golden Germ". He was flanked by prof. F.B.J. Kuiper, who took up his office in 1939 and retired in 1978. Kuiper is especially renowned as a linguist and had devoted himself for many years to linguistic problems, esp. to those connected with the influence exerted by the non Aryan languages of ancient India on Sanskrit. As a result of this he published a study on proto-munda words in Sanskrit. Besides, he wrote many articles on the meaning of Vedic myths and other aspects of Vedic religion. In 1979 he contributed to this subject by publishing a book on Varuṇa and the viduṣaka, the jester.

From 1932 until 1976 prof. Dr. J. Gonda has occupied the chair for Sanskrit in Utrecht. During all these years, and also afterwards, he has been very active and he brought the Indological studies in Holland to great prosperity. His scientific activities are as impressive as those of Caland, for a bibliography of Gonda up to 1972 see Chemperath:

1972. It is in this context impossible to give a survey of them, because they are too voluminous. He first devoted himself to problems connected with the expansion of Indian culture in Indonesia. The Indonesian languages formed a part of his academic tasks. He published an edition of the Old Javanese "Brahmandapurāṇa" and a volume "Sanskrit in Indonesia", together with many other articles on this subject. Later on he returned to the Veda and Hindu Religions, having a preference for those problems which may be brought nearer to a solution by philological methods in the largest 'continental' sense of this term. Thus he studied the history and attempted to establish the exact meaning of some terms of outstanding religious importance, such as for instance, his book on the meaning of the word, "brahman". Another important publication is his book, "Aspects on early Viṣṇuism". In the last twenty years Professor Gonda has devoted himself especially to the study of Vedic texts and Vedic ritual. His translation and interpretation of the extremely difficult "Kauṣika Sūtra, chapters 60-68" is an outstanding example of his scientific activities. In this field many other scientific works have been published by him. Lastly mention should be made of the many impressive survey works, which were written by Gonda. He wrote two volumes on the history of Indian Religions, basing himself upon the philological traditions. In 1975 he published an outstanding survey on "Vedic literature" followed in 1977 by a survey of the "Medieval Religious Literature in Sanskrit". These books were published in the important new series: A History of Indian Literature. A Hist. of Ind. Lit. many authors have made contributions to this series, in which the newest results of the many branches of Indian literature are worked up. Another important series to which Prof. Gonda recently made another contribution is the "Handbuch der Orientalistik". In this series he published his voluminous book "Vedic Ritual, the Non-solemn Rites". Though Prof. Gonda is about 79 years old, he still is very active and publishes books and articles. He is one of the most prolific authors in the field of Indology. Moreover, he is known as a good and methodical teacher. Under his supervision 62 of his pupils wrote theses a number, which is unsurpassed in the literary faculty of the Dutch universities. During his professorship many Indians came to Utrecht to write and defend their theses under his auspices. I mention in this connection Dr. Lokesh Chandra, the son of Raghu Virā, who translated "Jaiminīya Brāhmaṇa II, 1-80 (Gavāmayana)". He succeeded his father as director of the International Academy of Indian Culture. Further I would like to mention Dr. G. Chemperathy, who wrote a thesis on Indian reational theology.

The economic prosperity in Holland, which also contributed to the development of Indological studies at the universities, has come to an end. As a consequence of this, the universities are forced to reduce their expenses. Moreover, the Dutch government has ordained by law to concentrate the study of Indology at two universities. This will lead to the closing of the departments of Indology at the State Universities of Amsterdam and Groningen. The scientific staff of the Indological departments of the State Universities of Utrecht and Leiden will be reduced. This reduction doubtless will lead to a retardation of the development of Indology in the Netherlands.

the current research, done during the last three years, which does not have the pretention to be complete. Groningen:- The University of Groningen had one chair for Sanskrit and the study of Indian cultures, which became vacant in 1983, when prof. dr. J. Ensink retired. There are some Readers and assistants for Hindi and Bengali, Pali, the Indian religions and philosophy, Sanskrit and the study of Indian medicine. In 1988 the department will be closed and the people working there will be discharged.

During the past years especially research was done in the field of pilgrimage in India. Mr. H. Bakker prepares a thesis on the Ayodhyā Mahātmya. A critical edition and an annotated translation will be published by him at the end of 1984. Dr. A.E. Entwistle makes a study of Brāj as a centre of Kṛṣṇa worship, especially of the trail of pilgrimage sites. He is an authority on the Vallabha sect and wrote a thesis on the "Rāsā Mana Ke Pada of Kevala-rāma", a medieval text of the eight Gāddī of the Vallabha Sect, which was published in Groningen 1983. Prof. Dr. J. Ensink prepares a survey of Indian sources and the present state of research concerning Hindu, Buddhist and Jaina pilgrimage 26.9.84 in South India, which will be published in the series "The History of Indian Literature."

The study of Indian medicine and its related texts is another speciality of the Indological department of Groningen, Dr. G. J. Meulenbeld works on this subject. He wrote an important and voluminous thesis "The Mādhavanidāna and its chief Commentary, chapters 1-10, Introduction, Translation and Notes", Leiden 1974. At the moment he prepares a survey on the medicinal Sanskrit literature, which will be published in 1985 in the series "The History of Indian Literature."

Dr. Sarkar makes a study of literary themes in Sanskrit, Hindi and Bengali literature.

Dr. L.P. van den Bosch works in the department of Theology in the field of the history of religions and comparative religion. The field of his research is especially the Vedas, at Groningen.

Amsterdam:- The University of Amsterdam had three chairs for Indological studies; one for Sanskrit, one for middle and new Indian languages, and one for the archeology and art of south and south-east Asia. Moreover, there are three readers and assistants for the various branches in this field. At the moment all three chairs are vacant and will not be filled again. With the death of Prof. dr. van Lohuizen-de Leeuw, the Institute of archeology of south and south-east Asia will be closed and the people working there discharged. Prof. Van Lohuizen has done during many years research in this institute. After her thesis on "The Scythian Period" (Utrecht 1949) she has devoted herself to the various aspects of Indian culture influenced by the Scythian (1st - 5th century) during the last ten years. She wrote several important papers on this subject. Moreover she made a study of the origins, place and iconography in India and Śrī Lāṅka of the god Aiyanar.

Most of the other people working in the institute of archeology of south Asia do their research in the field of the history and archeology of Indonesia and South-east Asia. They have, however, one combined project, namely a study of Brahminical gods and Mathura. The Kuṣāna period

represents the beginnings of the iconic era of India. Iconographic and stylistic research into the representations of deities, is therefore very important to the study of the developments of religious ideas and art in India.

The instruction in Sanskrit and Hindi at the university of Amsterdam is given by Dr. J.A.F. Roodbergen and Dr. D.F. Plukker. Dr. Roodbergen defended in 1981 his thesis "Mallinātha's Ghantapatha on Kirātārjuniya". Further he is engaged in a long term project in collaboration with prof. Dr. S.D. Joshi concerning the Mahābhāṣya of the Sanskrit grammarian Patanjali. In 1981 a publication was prepared "Patañjali's Vyakarana-Mahābhāṣya, Introduction, Text, Translation and Notes", Pune 1981. Dr. Plukker makes a study of one of the oldest Hindi texts, the Miragāvatī of Kutban. He edited in 1981 this Avadhī text with critical notes (thesis Amsterdam 1981). During the coming years he will work at a translation of this text.

Utrecht: The University of Utrecht has three chairs for Indological studies: one for Vedic and Sanskrit (Prof. Dr. H.W. Bodewitz), one for Indian philosophy (Prof. Dr. G. Chemperathi) and one for Dravidian languages, (Prof. Dr. K.V. Zvelebil). Besides, there is one chair in the department of theology for the study of Indian religions, which is vacant. Prof. Dr. J. Gonda, who is retired since 1976, is still very active and many publications of him have appeared since then.

The research which was done during the last ten years in Utrecht was focused upon various themes. In the first place mention should be made of studies on Vedic literature and religion by prof. Dr. J. Gonda and prof. Dr. H.W. Bodewitz. The translation and interpretation of Vedic texts are a speciality of the Indological department of Utrecht since Caland. A recent publication is prof. Gonda's book "The Haviryajña Somah, the Interrelation of the Vedic Solemn Sacrifices", Royal Academy 1982. Prof. Gonda is a specialist, par excellence, of the intricate problems connected with Vedic ritual. Prof. Bodewitz is a specialist of the Brāhmaṇa literature. Many of his recent publications are devoted to subjects in this field.

Another important research project is centred upon the Pañcarātra and Tantric texts. Dr. T. Goudriaan, Dr. S. Gupta, Dr. Th. Damsteegh, Dr. K.R. Van Kooy and Dr. J.A. Schoterman work in this field. A critical edition of the Kubjikamatatantra and the Nāśikhatantra are prepared at the moment. Important surveys were published on Tantric literature in Sanskrit and some new Indo-Aryan languages in the series "Handbuch der Orientalistik" (Handbuch) (Dr. T. Goudriaan, Dr. S. Gupta and Prof. Dr. J. Hoens), and the series "Hist. of Ind. Lit." (Dr. T. Goudriaan, Dr. S. Gupta). Dr. J. A. Schoterman defended in 1982 his thesis "The Śaṭsahasra Samhitā, Ch. 1-5, ed., transl. and annotated". Utrecht.

Prof. Dr. G. Chemperathi, specialised in Indian philosophy, completed this year his study of the authority of the Veda according to the Nyaya and Vaisheshika systems. The title of his book is: "L'autorité du Veda selon les Nyāya-Vaiśeṣikas", Louvain la Neuve 1983. At the moment he has resumed his work on the translation of Udayana's Nyāyakusumanjālī.

Indian music and the related literature is the specialization of Dr. E. te Nijenhuis. She has brought out many publications in this field. At the moment she prepares, among others, an edition and translation of the Saṃgītaśiromani. Because of her important work she is honoured with a membership of the Royal Academy.

Dr. K.R. van Kooij is the specialist of South Asian art in Utrecht. He prepares a publication on Hindu mythological reliefs of the classical period (400-800). The attention is mainly directed to changes in the groups of attendants and minor deities, which give information about the developments in the Hindu religion and about the religious attitude of the people living in the same period. The literary sources about this theme form an important part of this study. Besides, he prepares a translation of the chapters of the Kālikapurāṇa with the iconographical precepts.

Dr. Damsteegt works in the field of modern Hindi literature and deals in his literary research with the characteristics of the so-called "naī kahānī", one of the branches within the short stories.

Prof. Dr. Zvelebil has published many books on Dravidian languages. He wrote two important monographs on Tamil literature which were published in the series "The Hist. of Ind. Lit." and "Handbuch". At the moment he prepares a history of Tamil Literature. Recently he completed a textual and contextual study of the South Indian Deity Murugan. Another important project concerns the mythology and the religion of the Irulas. A publication on the Irula language was prepared last year by him and edited by the Harrassowitz company in Wiesbaden. Under his supervision Dr. Kerseboom prepares a thesis on South Indian Temple dance which will be completed in 1984.

Dr. R. Kloppenborg is a specialist in Theravāda Buddhism and prepares a publication on the Bodhisattva Maitreya.

Leiden: The University of Leiden has four chairs for Indological studies: one for Sanskrit and its literature (prof. dr. M. Witzel); one for the history of Indian civilization and its languages (prof. dr. J.C. Heesterman), one for the Indian philosophy, Buddhism and Tibetan languages (prof. dr. T.E. Vetter) and one for the study of archeology and old history of south and south-east Asia (prof. dr. J.G. de Casparis). Besides, there are several readers and assistants for the various branches.

The study of Vedic religion and literature is an important part of the research program of the Indological department in Leiden. Prof. dr. F.B.J. Kuiper, who retired in the seventies, was very interested in Vedic mythology and wrote several papers on this subject. In 1979 he published a book on "Varuṇa and viduṣaka, on the Origin of Sanskrit Drama". His successor in Leiden is Prof. dr. M. Witzel, who also is especially interested in the Vedas. At this moment his research program deals with the historical topography of Eastern Iran and its neighbouring areas. Because the material on this subject is rather scanty, Witzel tries, among others, with the help of Chinese sources to assess a topography of this area of the period between 500 B.C. and 700 A.D. Together with his colleague, prof. dr. Hesterkamp and prof. dr. Bodewitz from Utrecht,

Witzel makes research into the history of the tradition and the significance of the Veda and its ritual. Many manuscripts of Vedic schools have become available, among which are many unknown texts. The emphasis is on texts editions, analysis and further recordings of recitations and rituals. Prof. dr. Heesterman, who has written a thesis on 'the Aciént Royal Consecration', works on projects, in which he tries to study the ancient ritual traditions with new social-anthropological theories. Dr. Sparreboom defended in 1983, his thesis on 'the Vedic battle chariot.' He gives a description of the ancient Indian chariot (ratha) in war, races and ritual.

Prof. dr. T.E. Vetter does research in the field of the Buddhism and the Indian philosophy. He has a research project on the radical destructive dialectics of Nagarjuna, the decreasing of it with Maitreyanatha, and the transition to the "ātman" traditions of Gaudapada. Under his supervision Dr. Danielson prepared in 1981 a "thesis on the doctrine and evolution of Sankara," in which he made a study of two important concepts, namely "avidyā" and "jīvanmukti." In 1982 a thesis was defended by Dr. Nihom on the "Yogaratanmala", a Buddhist-Tantrist commentary on the Hevajratāntra. Dr. Poelmeijer also prepares a thesis under the supervision of Prof. Dr. Vetter. He deals with a subject in the field of the Tibetology, the theoretical introduction of Tsong-Kha-Pa's "Lam-rin-chen-mo" and his ideas about the mental development process in the simple human.

Dr. G. Schokker works in the field of the Indo-Aryan languages. He does research into language variants and ways of expression of Bhakti poets. In the field of prakṛt, research is done by Dr. Tiekens who completed in 1982 a thesis: "an edition of Hāla's Sattasāī." In his future research programme he makes mention of a text edition of "the Gāthāsa-ptasati," a compilation of short poems, which is dated about 700 A.D.

Dr. A. Govindakutty is the specialist of Dravidian languages and makes a linguistic study of the phonology and morphology of old Malayalam.

Prof. Dr. de Casparis prepares a great study on the history and culture of Indonesia until about 1500 A.D. His aim is to arrive at a new manual for the ancient history of Indonesia in agreement with the present day knowledge and in the framework of the history of South-East Asia as a whole. Together with prof. Dr. R.S. Sharma (Delhi) and prof. A.K. Narain he works on a good English translation of sources for the study of ancient history of South Asia. With Dr. Hinzler, a specialist in the Balinese language, and other persons, prof. de Casparis works on a large project of documentation and study of art historical and cultural historical material from Bali, Java and Further India.

Dr. During Caspers is the specialist in the archeology and prehistory of South and south-east Asia. In her research program she makes mention of a revaluation of the Indus culture.

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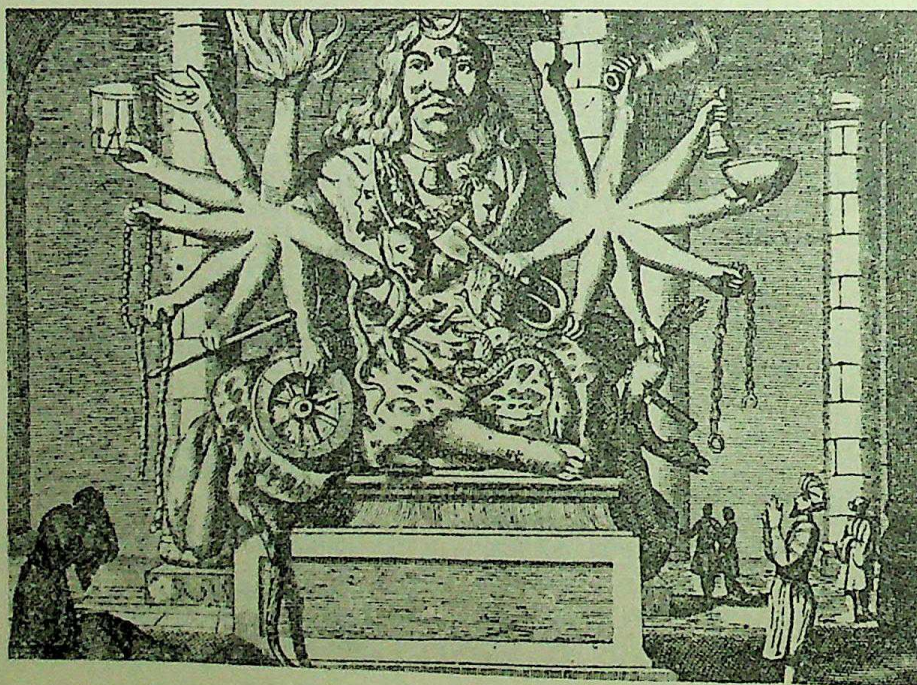
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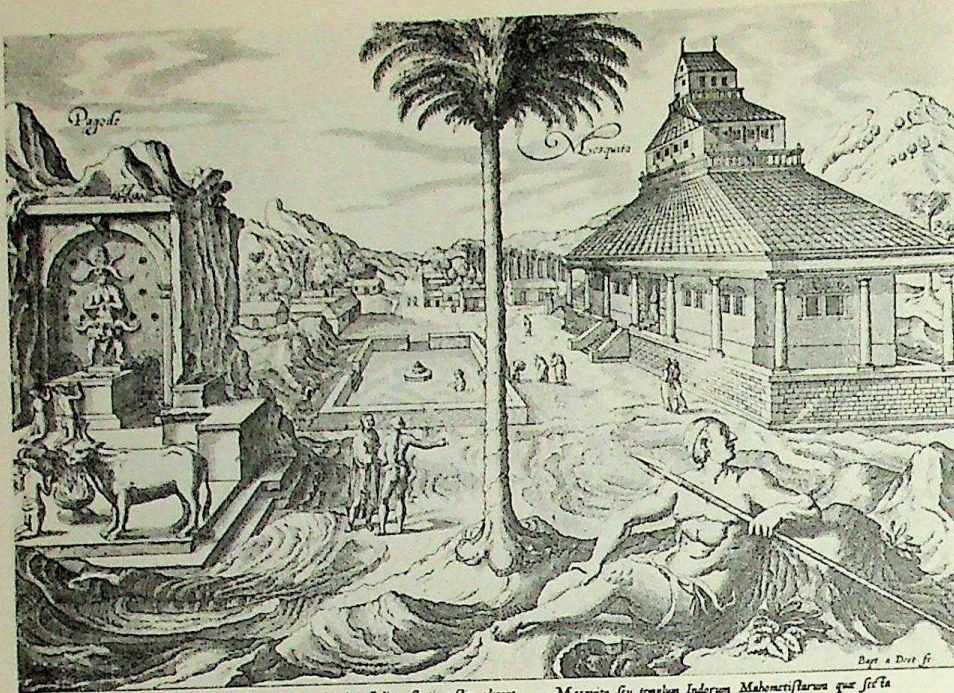


*Bramenes cum mortuus est, secundum eorum legem crematur uxor
autem eius, pro amore, sese eorum in ignem cum illo coniicit*

*De Bramene doet verbrande wort nae haer wet verbrande, en syn
vrouw wt liefde haers mans, verbrande haer evenwel met hem.*

58 m. 39

Representation of the burning of a suttee, in J.H. van Linschoten,
CC-0. In Public Domain. Digitized by eGangotri



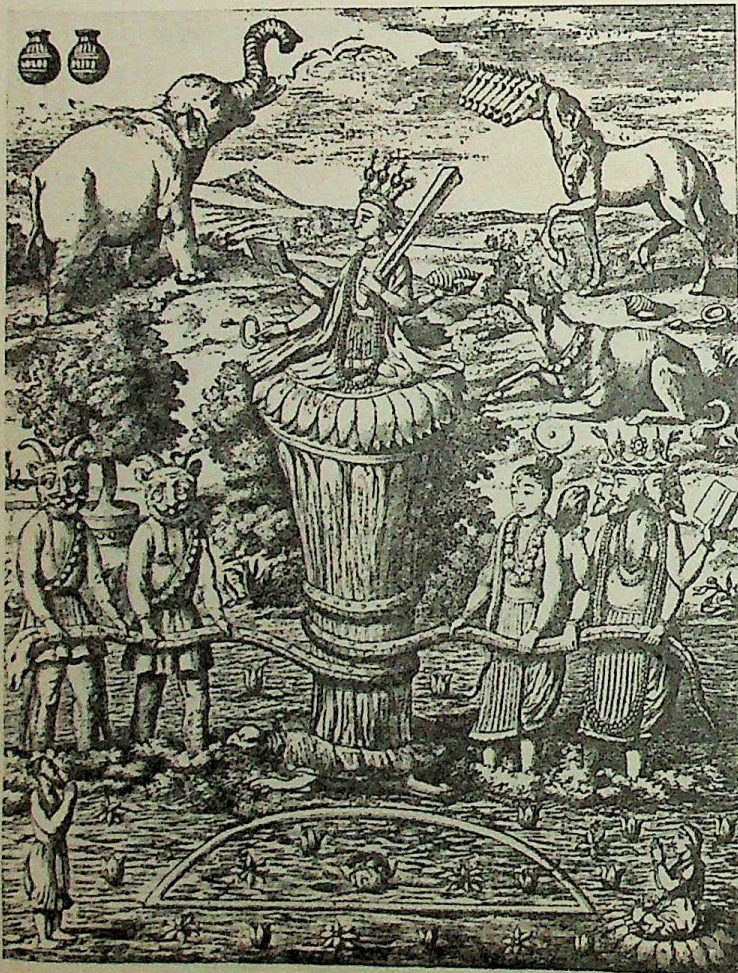
*Horrenda Mahometi effigies, quae in omnibus vicinis amplius obvia Indi prostrati passim adorant
et deique propitiatur. a Brachmanis sacrificibus, et frequentius quatuor. quid
Sordiditudo, etiam de Indiarum effigie, efficitur, et aliis locis, vani de regibus, vel de his
effigies, hinc in fere de veneratione, etiam de his regibus Brachmanis (die
in quibus vani prostrati hinc fere gaudet fere) Pagode generant.*

*Mosquita seu templum Indorum Mahometistarum quae sic la
terum fore, orientem pervasit.*

*Mosquita est templum de Mahometistis Indiarum, vel de
Jachia hinc gebel Orientem dardrungen heeft*

65 en 66

Representation of an Indian idol in a 'pagode' and a mosque, in J.H. van Linschoten, Itinerario, Amsterdam 1596.



Representation of the churning of the milk-ocean: in Philippus Baldaeus, Afgoderye der Oost-Indische Heydenen, Amsterdam 1672

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PĀṆINI

By S. D. Joshi

1.1. Introductory

1.1.1. India can justly be called the cradle of linguistic science. The achievement of Panini, on which such a claim is based was not a sudden phenomenon, but the culmination of a long tradition.

We find mythical and magical speculation on speech and sound in the Vedas and Upaniṣads, which can be characterised as constituting the prescientific stage. However, the inspiration for grammatical analysis in India was the need that was felt for preserving intact the orally transmitted Vedic texts. The Brahmaṇas (C.800 B.C.) while attempting peculiar exercises in etymologies (parokṣavṛttis) tried to analyse words into their elements and to assign meanings to these elements. This led to the beginning of grammatical analysis. The correct transmission of the Vedic texts is achieved by the padapāṭha (C. 600 B.C.) which isolates words that are joined in saṃhitās; 'Continuous text' by dissolving saṃdhis. By thus isolating words the Padapāṭha preserves the word-finals intact which are otherwise vulnerable to Phonetic alternations. The Śikṣās (general phonetics) (C.600 B.C.) describe the mechanisms of articulations and offer amazing insight and precise sound classification into such features as voicing/unvoicing, aspiration/non-aspiration, nasality, Vowel quantity accent etc. The pratiśākhyas (treatises on applied phonetics C. 500 B.C.) mainly deal with phonological rules designed to account for special features of Vedic recitation, characteristic of the particular Vedic branches. The Nighaṇṭu is mainly a list of difficult Vedic synonyms meant for use by the teachers of the Vedas. The Nirukta of Yaska (C.400 B.C.?) offers a discussion on the parts of speech: nouns and verbs (inflected), and prepositions and particles (uninflected), and attempts to analyse irregular Vedic words on which root and suffix elements are not clearly recognisable.

Pāṇini (C.350 B.C.), who mentions a number of predecessors, can be revivied as the final redactor of earlier grammatical tradition which had started some centuries before him. Pāṇini's Aṣṭādhyāyī: 'Eight Book' excelled all other grammatical systems existing at that time in exhaustiveness, economy of statements and exactness. The impact of Pāṇini's work on the later classical literature was so great that it can be said, that this later literature has been written, in a language codified for all times by the Aṣṭādhyāyī. Of no other language of the part do we possess a record comparable to Panini's for Sanskrit nor does it seem likely that any language spoken today will perfectly be recorded.

1.2. Influence of the Pāṇinian grammatical tradition on Modern Linguistics.

Pāṇini's model of description was one of the main instruments in the development of Comparative Philology in the nineteenth Century. There are two respects in which the Indian tradition influenced

Indo-European comparative grammar (i) in phonetics and (ii) in the analysis of words and sentences and their accentuations. Pāṇini's grammar provided modern linguists with devices and techniques to isolate and identify roots and suffixes primary and secondary word-formation. It also furnished a method of syntactic analysis the analysis of compounds and verbs. It described and used guna-vṛddhi alterations (allout system). All this served as the basis for the description of Indo-European languages. It is no exaggeration to say that Pāṇini's formal technique for the explanation of word and sentence-structure through the successive combination of elements with the help of ordered application of rules, resembles the present day generative grammar even though developed more than two thousand years later. Thus comparative grammar as well as modern generative grammar had at its service scientifically organised grammar of Panini.

1.2. Pāṇini's date and facts about his life.

1.2.1. There is no agreement among scholars with regard to the date of Pāṇini. Opinions range between seventh and fourth Century B.C. Internal and External evidence for Pāṇini's date is nill. The majority of Scholars are inclined to believe that Pāṇini belongs to the fourth century (C.350 BC). This date is fixed without absolute certainty and based on the date assigned to Patañjali (140 B.C.?), the author of the great commentary on the Aṣṭādhyāyī pre-supposing that two centuries must have passed between Patañjali and Pāṇini. This period of two centuries leaves room for other grammarians, notably Kātyāyana, Vyaḍi and others, who are known to have lived between Patañjali and Pāṇini. This date assigned to Pāṇini is only a working hypothesis. It still remains one of the major open problems of India Chronology.

2.2. Tradition about Pāṇini's life.

The Chinese pilgrim Hsuan Tsang offers a description of the Indian regions he visited. He describes how he reached the area of Gāndhāra and how he reached a town called "so-lo-tu-lu" (Sātātura), where the memory of Pāṇini was still alive. He further states that Sātātura is the place where the Rṣi Pāṇini who composed the Vyākaraṇa (Grammar) was born. Pāṇini himself mentions Sātātura in a rule (P.U.3.94) for the purpose of deriving the form Śātāturiya belonging to the country of Sātātura. Cunningham has identified Sātātura with the present Lahour, a small town four miles northwest of Ohind.

2.3. Patañjali calls Panini dākṣiṇputra: 'Son of Dākṣi' (Keilhorn' edition of "The Matabhaṣya" vol.I.p.75). That the Dakṣas belong to the northwest region somewhere in Gandhara (i.e. Afghanistan) is suggested several examples given in the Kāśikavṛtti (700 A.D.) the earliest existing commentary of Pāṇini's Grammar (p.u.2.142, G.2.127, 8.4.8 etc.). A traditional legendary account of Pāṇini's life mentioned in the Kathāsarit-

sāgara (11th Century A.D.) etc. is not taken into account here.

3. Pāṇini's Works : the Aṣṭādhyāyī, Dhātupāṭha and Gaṇapāṭha.

3.1. The text of the Aṣṭādhyāyī, which consists of nearly 4000 aphorisms, is divided into eight adhyāyas: 'Sections'. Each section is further divided into four sub-sections called Pādas: 'quarters'. Probably the original text was written down but transmitted orally because of sacredness of the work and scarcity of the writing material. The manuscript tradition gives practically no variations in its readings. Yes we cannot say that the text of Pāṇini's grammar has been handed down to us altogether in its original shape. Kielhorn has shown that the present text of the Aṣṭādhyāyī contains some 50 rules which are different from the text as known to Kātyāyana and Patañjali (Indian Antiquary (16), 1887 pp. 178-184).

The text of the Aṣṭādhyāyī was based on a previous text the author of which closely described the language of the later vedic period and the early Sūtra literature with native speaker's ability (600 B.C.?). To this text several different zones like nipātanās: mention of readymade forms', Chandri: 'in the archaic language', Pracam: 'in the language of the Easterners' Udicām : 'in the language of the Northerners, Ṣaṇijñāyām : in its conventional sense' and several other zones left out in the earlier work, have been added by Pāṇini to accommodate usages which were found both earlier as well as later in respect of the language described in the main layer of the text. To make his work complete Pāṇini may have freely borrowed a lot of material from his predecessors as well as from contemporary grammarians. While joining these different bodies together in the text of the Aṣṭādhyāyī, Pāṇini took utmost care to change the wording of the earlier rules, so that it would fit the technicalities and methodical assumptions of his system. Therefore, the present text (B.C.300?) appears to be the achievement of one man, Pāṇini. The technicalities of his work were such that sorting out the additions by later hands in the text excluding some spurious awkward rules and some innovations suggested by Kātyāyana - would be pretty difficult, to detect. This text of Pāṇini was regarded as a sacred one and memorised by scholars along with the Vedic texts.

Probably the Aṣṭādhyāyī came to Kātyāyana and Patañjali not as a living oral tradition, but in the form of manuscripts. The oral text contained nasalization as a feature distinguishing the so-called vowels, and the svārita accent as indicating the section headings. But Patañjali shows no knowledge as to which vowels are nasalized and which words carry the svārita accent in the text known to him.

3.2. The Dhātupāṭha.

Besides the Scitrapāṭha (Text of Rules) the tradition ascribes the Dhātupāṭha (List of Verbal stems) and the gaṇapāṭha (List of Nominal stems) to Pāṇini. We find a close interconnection between the Sūtrapāṭha and the Dhātupāṭha, since Pāṇini mentions in the Sūtras all the conjugational classes and even some of their subdivisions as they occur in the Dhātupāṭha. The present text of the Dhātupāṭha is inflated. For example, the roots have

been with meanings, perhaps which came to be added after Patañjali. The list of roots in the Pāṇinian Dhātupāṭha was elastic and open to interpolations. That the present Dhātupāṭha records somewhat indistinguishably on inflated list is also clear from the fact that half of the roots in it have never been met with, in the available Sanskrit literature of any age.

3.3. The Gaṇapāṭha.

The Gaṇapāṭha is another Appendix to Pāṇini's Grammar. The Gaṇapāṭha groups together nominal forms which behave similarly in certain grammatical formations. Pāṇini in his Sūtrapāṭha gives only the initial word of these lists. The Gaṇapāṭha List also appears to be accommodative and open to interpolations. It is a hard job to reconstruct the several lists into what was intended by Pāṇini and relate them to the Sūtrapāṭha. In their basic conceptions the Dhātupāṭha and the Gaṇapāṭha were Pāṇinian, although they may be partly post-Pāṇinian in their present forms. The original structure of these works has become obscure with the introduction of new material to account for new linguistic phenomena emerging at later stages.

3.4. The Uṇādisūtras, Līnganuśarana and Paṇiniyaśekṣā.

We cannot assign all the Uṇādisūtras to Pāṇini's authorship, although they follow the Pāṇinian technique and method of description. The Uṇādisūtras follow the view of Sākaṭāyana, a pre-Pāṇinian grammarian who stretched the principle of analysis to the extreme by deriving every basic nominal stem from a verbal root. The present form of the Uṇādisūtras which attempts the analysis of words which possibly was not known to Pāṇini, is no doubt post Pāṇinian. Many awkward and theoretically inconsistent derivations given by the Uṇādisūtras lack the systematic and logical character of Pāṇinian analysis.

It is highly unlikely that the Līnganuśarana (a treatise on Gender) and the Paṇiniyaśekṣā (a treatise on General Phonetics) which bear the stamp of modernity are highly unlikely to stem from Pāṇini. Pāṇini's grammar does not deal with gender which is grammatically unpredictable, and knowledge of Phonetics in virtually taken for granted.

4. The directly Pāṇinian Commentarial literature (and Modern translations).

4.1. The main aim of Kātyāyana's short notes called Vārtivās (C.150B.C.?) is not to explain Pāṇini's Aṣṭādhyāyī, but to improve upon it, where it falls short of achieving its goal. Patañjali's Mahābhāṣya (140 B.C.?), the record most important text in the Indian grammatical tradition, also tries to make Pāṇini's system logically and materially perfect.

Patañjali's Mahābhāṣya is a storehouse of information concerning general linguistic and semantic problems. It also touches on various topics of philosophical interest which arise in the course of explaining Pāṇini. Kātyāyana and Patañjali show a difference in attitude towards the Pāṇinian tradition. The former straightforwardly proposes changes in Pāṇini's rules, but the latter is more inclined to make use of reinterpretation and to keep the Pāṇinian original formulations intact.

The earliest existing Vṛtti on Pāṇini (7th Century A.D.) is the Kāśīka composed jointly by Jayaditya and Vamana. The Vṛtti is an indispensable aid for the understanding of the Aṣṭadhyāyī.

Then many diverse schools (Kātantra, Cāndra, Jainendra etc.) arose in the course of time but none of them remain as the centre of attraction. They are entirely dependent on the Pāṇinian model of description, and display little originality. The later works in the Pāṇinian schools, excluding the Mahābhāṣya and the Vākyapadīya of Bhartṛhari (400 A.D.), can claim no great originality. But they are systematic and comprehensive in character and some of them show interest in Descriptive Semantics also. What is 'new' in the later works as opposed to those of earlier ones is their use of a number of techniques, like Paribhāṣās, Jaṇāpakas and Sāldalodha : 'Semantic paraphrase' which give their analysis and arguments great precision.

This Commentarial literature is an enormous storehouse of subtle linguistic insights and forms the backbone of our present undertaking of the system. Yet the entire traditional explanation needs to be checked before it can be accepted. It is doubtful whether there is any direct teacher-student connection linking Pāṇini, Kātyāyana and Patañjali. It may perhaps provoke strong reaction among scholars to say that the commentaries do not know a genuine Vṛtti tradition, as their interpretation of number of rules is quite wrong. But this seems to reflect the true state of affairs. It is accepted that Kātyāyana was a Southerner and belonged to a different grammatical tradition. Therefore, it is likely that the commentators knew the text not through a continuous moral tradition but in a form of secondary origin, i.e. manuscripts and a Vṛtti handed down with it.

5. The translations and editions of Pāṇini.

5.1. The text of the Aṣṭadhyāyī has been edited several times in India. Otto Böhtlingk for the first time edited critically the Aṣṭadhyāyī (Leipzig, 1887 reprint 1964) with a German translation and valuable indices. The translation is faithful but often unintelligible. S.C.Vasu translated Pāṇini into English (1891, reprint Delhi 1962) following the Kāśīkāvr̥tti. Louis Renou translated Pāṇini into French (Paris 1947-54 revised 1966). His translation is based on later commentaries, especially the Bhāṣāvr̥tti. We have a few translations in Indian Languages which are loose and not reliable. The definitive translation is a primary desideratum. A complete set of theoretical conventions behind the system needed for a fuller understanding of terms in Sūtras is not given in the Sūtrapāṭha. The oral gloss which spelled out the elements to be carried away from the preceding rule and provided examples, has been lost since long. Our job should be to reconstruct this oral tradition. Further the new edition should try to interpret the rules on the basis of attested examples, preferably from the literature known to Pāṇini, instead of relying on examples, supplied even in the earliest commentaries.

6.1. Technical terms (Samjñas) and formal Conventions (Paribhāṣās).

6.1. Pāṇini's Aṣṭadyāyī has its own vocabulary.

Pāṇini uses nearly 300 technical terms, but all of them are not defined by him. He has defined only about 125 terms. He defines the śāstriya (theoretical) terms which have been coined from grammar and which do not bear the same meaning outside grammar. (Paul Kiparsky, "Pāṇini as a variationist"). For instance, Varḍdi : 'ā, ai, au' (P.1.1.1) niṣṭha : Past Participle suffixes ta, tavat (P. 1.1.26), ti : the Syllable beginning with the last vowel (P.1.1.64). Similarly, he defines the so-called upadeśa terms which provide a theoretical understanding of the structural level of language and which figure in the underlying representation of forms (prakriyā) even if they are used outside grammar and familiar to the laymen. For instance, rhasva 'short' (P.1.2.27), deergha : 'long' (P.1.2.27), Laghu : 'Light syllable' (P.1.4.10), guru : 'heavy syllable' (P.1.4.11), Sanyoga : 'Conjunction' (P.1.1.7). Such terms are defined for their precise role in derivation and to avoid possible misunderstandings. But the theoretical terms from other fields which are adopted in this grammar and which do not figure in the underlying representations of linguistic structure (upadeśa or Prakriyā) are not treated as the special vocabulary of grammar. For instance, ritual terms like Yajus, Sāman, ekasrute : utterance in the same tone' phonological terms like anusvāra : after-sound (marked by dot) Visarjaniya : Voiceless fricative, or even grammatical terms which non-linguists also employ like liṅga, (gender) anvādeśa (restatement), adhikara 'Section heading' terms from poetics like upamā (Simele) Sāmānya common characteristic between the standard of comparison and the object which is compared, philosophical terms dravya : (Substance) 'guṇa' : (quality) Jāte : (genus). These terms which have originated from other sciences are not defined because they do not figure in upadeśa : (underlying representation) from under analysis'.

6.2. The formal Conventions (Paribhāṣās).

The Aṣṭadhyāyī contains a number of Paribhāṣā rules (conventions) for a full understanding of the structure of the Pāṇinian system. The characteristic feature of the Aṣṭadyāyī is its technical use of the Sūtra style. Pāṇini not only uses a technical vocabulary to explain the factual level ('the object language'), but he uses a technical syntax also. (See also 3.1. last para). Pāṇini gives paribhāṣās which (i) determine exactly how the technical Syntax is used in his rules. For instance, rules P.1.1.67, 1.1.49, 1.1.66 define the meaning of the ablative (Parīcame) genitive (Ṣasthé) and locative (Saptamē) respectively as 'after' in the place of 'and' before'. Some Paribhāṣās (ii) tell us how the terms in a rule are to be interpreted. For instance, P.1.1.68 states that in the context of linguistic analysis a word stands for its own form and does not refer to its meaning. Still again other Paribhāṣās (iii) state the conventions according to which this grammar is organised. For instance, P.1.4.2, 6.4.22, 8.2.1. tell us how rule interacts in derivation, how certain rules are limited in their application by others and how rules are mutually ordered in application.

It appears that Pāṇini assumes two levels of language: (i) the factual level (prayoga : usage), (the object language'), and (ii) the structural level of forms under analysis (upadeśa) : ('the meta language'). Pāṇini's use of a technical vocabulary, technical syntax, technical expressions may imply

that he was aware of using what may be called metalanguage. Similarly, some of the technical terms (Sāstriya) such as lot (P.3.2.123), Kha (P.7.1.2), tha (P.7.3.50) are purely metalinguistic terms with no counterpart in 'the object language'. But the other terms like anunāsika : nasalized sounds' (P.1.1.8), Udatta : 'high-pitched vowel', (P.1.2.29), Svarita : 'high low pitched vowel' (P.1.2.31) which have a counterpart in 'the object language' are also defined by Pāṇini since they occur in the Upadesa system, i.e. in the form under analysis.

But the Aṣṭādhyāyī does not give nearly complete set of conventions that is required for a full understanding of the structure of the system. For instance, it does not tell us when one rule is an exception to another one, or how the scope of anuvṛtti (dittoing) is determined in a general way.

6.3. The device of anuvṛtti is employed by Pāṇini to achieve maximum economy in phrasing the statements. The arrangements of rules in the Aṣṭādhyāyī is set out in such a way that repetition of words in relation to succeeding rules is rendered unnecessary. The anuvṛtti of certain words, which sometimes extended over fifty or more rules, forces the arrangement of rules in a fixed order. For achieving the sort of economy rules are at times taken away from their natural places and fixed together with those belonging to other Sections. Owing to these peculiar features it becomes difficult without the aid of the traditional commentaries to interpret the rules in the Aṣṭādhyāyī in which sometimes ten or more words are to be supplied. Although Pāṇini does not state the conventions pertaining to anuvṛtti one can reconstruct them by studying the Aṣṭādhyāyī as follows:

(i) Normally items are continued by anuvṛtti from the preceding rules into subsequent rules until they are blocked by an incompatible item, (ii) the function of ca is to abbreviate two rules into one by following continuation of an incompatible item from the preceding rule into the following rule (iii) ca amounts to 'option' if the rule containing ca introduces a new process (vidheya).

7. Language analysed by Pāṇini.

7.1. Pāṇini does not mention any name of the language analysed by him. Most of the rules do not make a clearcut distinction between a written and spoken form of language (excluding the cases of some zones as indicated chandasi, bhāṣāyāni and others). Pāṇini mentions at least eight predecessors by their names. The Vedic texts either mentioned by their names or used by Pāṇini for his grammatical explanations are the R̥gveda, the Maitrayaṇi Samhita, the Kāthaka-samhita, the Taittiriya Samhita, the Atharva Veda, and most probably the Sāma Veda (Paul Thieme, "Pāṇini and the Veda" P.63). The other Vedic and non-Vedic texts undoubtedly known to him include some Brāhmaṇas (P.4.2.66, 4.3.72, 105). Some Śrauta Sūtras (P.4.3.103), the Vedic Caranās: 'branches' (P.4.2.46), the Kalpa works (P.4.3.105), Sakalya's Padapāṭha (P.1.1.16-17) the grammatical works Nāmika and Akhyātika (P.4.3.72), the Bhikṣusūtra and the Naṭasūtra (P.4.3.110), the Karma text of Vedic recitation (P.4.2.61), the Sloka and the Gāthā literature (P.3.2.23), literary works like the ākhyānas, 'Stories' (P.4.2.103), Śiśukranda, yamasabha Indrajanana (P.4.3.88). Pāṇini also classifies literature by referring to its characters

under such heads as dr̥ṣṭa : ('revealed' P.4.2.7), Prokta : (promulgated P.4.3.101), upajñata : (expounded for the first time), grantha (any text P.4.3.87)

The word bhāṣā : 'non-Vedic speech' or colloquial dialect' occurs seven times in the text and these rules follow up the zone of Chandas. The word indicates a distinct preference to stylistic forms in the non-Vedic-speech although only seven times. The Aṣṭādhyāyī also uses three words vā vibhaṣa and anyatarasyām to denote different preferences among optional variants; Vā : 'preferably', Vibhāṣā : 'preferably not' (rarely), Anyatarasyām : 'both'. Through these words the Aṣṭādhyāyī registers stylistic or linguistic preference (Paul Kiparsky, "Pāṇini as a variationist"). The Aṣṭādhyāyī also records regional variations of speech community. For instance, Prācām 'in the speech of the Easterners' (P.1.1.75, 2.4.60, 4.2.120 etc.), Udicām 'in the speech of the Northerners' (P.3.4.91, 4.1.130 etc.). These can be taken as regional variations. Apart from this, the Aṣṭādhyāyī mentions linguistic variations in speech restricted to particular societies or areas. For instance, Sauvīra : a region in modern Sindh, (now in Pakistan) (P.4.1.148, 4.2.72), Vāhika : 'name of a people in Punjab (p.5.3.144), Uśinara : 'name of a people in Central India (p.2.4.20, 4.2.118, Pracybharata : inhabitants of the eastern country and the bharata regions (p.2.4.66, 4.2.113) etc.

Thus we have no evidence to say that Pāṇini has described his own language only. The better supposition would be that the Aṣṭādhyāyī records usages (spoken as well as written) current in different regions and at different period of time side by side. However, the analysis of Sanskrit in the main-body of text (i.e. everything excluding the zones containing Chandasi, bhāṣāyām, prācām, udicām, etc.) resembles very much the language of the later Vedic prose and that of the Sūtra literature. In Pāṇini's days Sanskrit was probably used as the language of religion, Scholarship, and administration. Prakrit vernaculars being preferred in private intimate talk as well as in the market. The higher class society may have learned Sanskrit in childhood and acquired native speakers' ability. Pāṇini's grammar standardised Sanskrit, used in the higher circles of Society. Gradually, the culturally leading class, imposed their prestigious language for official use. It was from this time onwards (around the beginning of the Christian era) that the language was being called Sanskrita, as opposed to Prākṛita (layman's speech). Later also for several centuries, Sanskrit continued to remain the medium of all learned and religious discourses.

8. Phonology and Morphophonemics in Pāṇini.

8.1. Pāṇini takes for granted the phonetic description of sounds, knowledge of phonetic terminology and the feature system required for classification and analysis of Sounds, all of which originated in pre-Pāṇinian works on Phonetics.

Fourteen rules (Śivasūtras) are added at the beginning of the body of the grammar to achieve economy by listing the sounds which are arranged in a specific order. These rules bring together those sounds which are often involved in certain grammatical operations. The sequences of sounds in the Śivasūtras are divided by the it markers. The abbreviations which are technically known

as prātyāhāras are achieved by joining the it markers to the preceding sound listed in the Śivasūtras. Thus from the sequences a ā i u (n) a ā i u are together designated by the term an. From a ā i u (n) r l (k), a ā i u r l are abbreviated as ak. Pāṇini uses a number of this type of abbreviations in his system. For instance, ā: 'all sounds', ac: 'vowels', hal: 'case terminations' tiñ: verb-endings.

The order of phonics in the Śevasūtras is based on the practical requirements of grammar, which single out the group of sounds which behave similarly in certain grammatical situations.

The mechanism of the articulatory organs and the points of articulation is not described by Pāṇini, but it is linked with grammatical analysis. Pāṇini uses two devices. Sāvarṇya (P.1.1.69) and āntaratamya (P.1.1.50). The first device tells us that certain sounds stand for sound classes if they have the same place of articulation and internal effort. The vowels a i u etc. stand for short and long varieties. Ku for K, Kh, g, gh, n. The second device tells us that out of the possible substitutes (ādeśa) that one is substituted which is most similar in phonetic features to the element to be replaced (Sthānin). For instance, in place of S and h th and dh respectively out of t, th, dh, n, are preferred (P.8.4.61-62).

In the Sāvarṇya device Panini gives importance to the place of articulation (sthāna) and internal features (ābhyaantara Prayatnas) whereas in āntaratamya device and in the arrangements of sounds importance is given to internal features and the manner of articulation (bāhya Prayatnas). In this way he combines different techniques and relates phonetics to phonology for the practical requirement of grammar.

8.2. Technique of Sthanins and ādeśa.

Pāṇini sets up abstract basic forms called Sthānins 'original' which by morphophonological rules are converted into actual (resultant) forms called ādeśa (substitutes). For instance, the nominative singular morpheme s (u) and its variants h r s s u and zero, are treated as ādeśas. An assumption of a zero morph is made to account for meanings and morphophonemic changes which are caused by the assumed Sthānins at the abstract level of representation even in the absence of their overt phonetic form. The concept of zero as an allomorph is a marvellous invention of Panini or of his predecessors. This technique of zero representation was adopted as one of the devices by modern linguists, directly from Pāṇini.

8.3. Morphophonological rules in Pāṇini.

Pāṇini's rules of modification deal with pairs of adjacent sounds as well as with pairs connected morphemes. So the field of phonetic modification comes within the range of morphophonemics.

The rules of euphonic combination are treated in P.6.1.184-214 and in the Tripādī Section (last three quarters of the eighth book). The basemorphonics which enter into a single word, vary in their phonetic forms, before inflexional and conjugational suffixes. Similarly the finals of words, vary before initials of adjacent words depending on certain

phonetic positions. The sandhi operations which are common to these, operate internally as well as externally to the word. On the other hand the Pada Sandhi rules, operate between words in Phrases, between members of compounds and at the end of noun-stems, before the case endings with bh and s.

Pāṇini's grammar considers morphonics along with phonology in the last three books of his grammar which can be regarded as the Synthetic part of the grammar. Inflexional and Conjugational variations in noun-stems, root-stems and suffix forms, are treated in the section headed by aṅgasya (P.6.4-1.7-4.94). These rules of morphonics are not extended beyond the grammatical word boundaries. The account of stem and suffixes and their shifts are treated in P.6.1.116-218, while the accent of compounds in P.6.2.1-6.2.199. The sentence accents and gemination are treated in P.8.1.1-8.1.74. Most of the Sandhi rules come under the Section heading Samhitāyāni : in continuous utterance (P.6.1.72, 8.2.108). The implication of this section is to forbid independent phonetic existence to words and their elements outside the continuous utterances. That is to say, observance of Sandhi, according to Panini, is obligatory. The phonological rules operate within words as well as within whole utterances.

9. Word derivation.

9.1. Rules in the Aṣṭadhyāyī can be grouped into four major Sections:

- (i) rules introducing technical terms (Samjñās) and formal conventions (Paribhāṣās) are mainly stated in the first two Sections (Pādas) of the first book.
- (ii) rules which are stated in the third and fourth Sections of the first Book and in the Second Book.
- (iii) rules of word formation which are stated in the third fourth and fifth Book and (iv) rules of synthesis (morphophonological rules) which are stated in the Sixth, Seventh, and Eighth books.

The Section on derivation, exhaustively lists the primary (kṛt) suffixes, forming nominal stems (prātipadikas) from verbal roots, and the Secondary (taddhita) suffixes forming nominal stems from the already existing nominal stems. The section also lists the case morphemes and verb-ending suffixes which derive finished words (Padas).

Primary nominal stems are derived directly from verbal roots listed in Dhātupāṭha by adding primary suffixes listed in the Sūtras, p.3.1.96-3.4.76, to them. For instance Kartṛ : 'doer' from Kṛ + trc (P.3.1.133). This section includes the derivation of potential, present, past, perfect participles, action and agent-nouns, infinitive, gerunds etc.

The secondary (taddhita) suffixes derive nouns from the basis of nouns. For instance, ghanin : 'possessed of wealth' from ghana + in (P.5.2.115). Pāṇini has classified the Secondary suffixes under various sub-headings : tasyāpatyam (P.4.1.92): 'his offspring', tasya samūhaḥ (P.4.2.37): 'collection of it', tena nirvṛttam (P.4.2.68): 'built by him', tata āgataḥ (P.4.3.74): 'arrived from there'. The

words tēna, tasya, tataḥ, etc. indicate the 'syntactic relations' ; instruments (Karaṇa), possession (śeṣa), removal (apādāna) etc. that exist between a nominal meaning and a taddhita meaning. For instance, Dāśarathi=Dāśaratha + genitive + in (p.4.1.95): 'offspring of Dāśaratha'. Under each sub-heading the suffixes a(n), ṭha (k) (=ika), pha (āyana), etc. are grouped together which convey the same meaning. In dealing with the taddhita-suffixes, Pāṇini adopts a double principle of classification : grouping different meanings under the same suffix and grouping different suffixes under the same meaning.

Pāṇini generates inflected words and nominal stems from the roots, suffixes and nouns listed in the Dhātupāṭha, Sūtrapāṭha and Gaṇapāṭha by applying morphophonological rules stated in the synthetic section. Many of the limitless number of words thus generated are actually recorded in literature, and some of the unrecorded words are potentially capable of being used, which shows

generative nature of this grammar. Pāṇini also mentions readymade words in the nīpatāna rules, most of which are phonologically irregular. However, it cannot be claimed that Pāṇini's grammar is a complete grammar of the Sanskrit language since some easily analysable words, like manas, havis, arcis, etc. are not derived by Pāṇini. The unādi words, many of which are awkward to analysis, are dismissed by panini in one Sūtra (P.3.3.1.). This way he refuses to derive them through the indiscriminate application of his grammatical theory.

9.2. Case terminations.

Pāṇini directly links 'the syntactic relations' with the case endings stated in P.4.1.2. These syntactic relations are further linked with semantic meanings conveyed by nominal expressions, which are of a non-linguistic nature. This gives us the following Scheme:

Semantic Meaning	Syntactic Relation	Items with which Syntactic relation is connected.	Case-table or triplet name	Case endings with (Syntactic relations)	Number Expressed
i) Item whose semantic role is made clear by the Verb-phrase: Subject	<u>Pzātipadikārtha</u> : 'nominal - stem - notion (only)', or <u>abhiḥita-kāraka</u> : 'whose Kāraka-role is expressed otherwise', P.2.3.1	a verb-phrase (P.1.4.23)	<u>Prathamā</u> : 'First case' P. 2.3.46	<u>S(u), au, (j) as</u> P. 4.1.2, 2.3.46	Singular, dual, plural. P.1.4.21-22 1.4.102
ii) directly affected or reached by the action : 'to', 'of'	<u>Karman</u> (grammatical object), P.1.4.49	-do-	<u>dwitīyā</u> : 'Second Case' P. 2.3.2	<u>am, aut, (ś)as</u> P.4.1.2, 2.3.2	-do-
iii) most effective means : 'with', 'by' 'through'	<u>Karaṇa</u> : 'instrument' P. 1.4.42	-d-	<u>tritīyā</u> : 'third case' P.2.3.18	<u>tā, bhyām, bhis</u> P.4.1.2, 2.3.18	-do-
iv) independent one: 'by'	<u>Kartr</u> : 'doer', p. 1.4.54.	-do-	-do-	-do-	-do-
v) object to which some-thing is handed over recipient: 'to', 'for', towards.	<u>Sampradāna</u> : 'indirect object aimed at through the direct object' P.1.4.32	-do-	<u>Chaturthī</u> : 'fourth case', P.2.3.13	(<u>ñ</u>)e, <u>bhyām, bhyas</u> , P.4.1.2, 2.3.13	-do-
vi) Source or Origin from from which some-thing move away: 'from'	<u>apādāna</u> : 'moving away', P.1.4.24	-do-	<u>Pañcamī</u> : 'fifth case' P.2.3.28	(<u>ñ</u>)as(i), <u>bhyām, bhyas</u> , P.4.1.2, 2.3.28	-do-
vii) general relation i.e. i.e. other than noun-verb relation : 'of'	<u>Śeṣa</u> : 'remaining' P. 2.3.50	a noun phrase	<u>Ṣaṣṭhī</u> : 'Sixth Case', P.2.3.50	(<u>ñ</u>)as, os, ām P.4.1.2, 2.3.50	-do-
viii) location or duration 'in', 'at', 'on', 'into'	<u>adhikaraṇa</u> : 'Substratum' P. 1.4.45	a verb-phrase (P. 1.4.23)	<u>Saptamī</u> : 'Seventh Case', P.2.3.36	(<u>ñ</u>)i, os, su(p) P.4.1.2, 2.3.36	-do-

9.3. The verb-ending suffixes.

Panini has no term for the grammatical category of the tenses and moods. He finds it convenient to present the tenses and moods by the symbolic

terms lat etc. which represent the finite structure of the moods and tenses. These symbolic terms belong to the abstract level of the underlying representation. His scheme of tenses and moods is as follows:

Tenses/moods as aspectual categories	Syntactic relations	Abstract representation	Voice	Endings	Person	Number
1.	2.	3.	4.	5.	6.	7.
<u>Vartamāna</u> : 'Present' tense (indicative mood)', P.3.2.123	<u>Kartari</u> : 'in Syntactic agreement with agent', or <u>Karmanj</u> : 'in syntactic agreement with grammatical object	<u>1 (aṭ)</u> P.3.2.123	<u>Parasmanipada</u> (active voice word for another)' P.3.1.78 (only Kartari), <u>ātmanepada</u> : 'middle voice (word for oneself)', either <u>Kartari</u> or <u>Karmanj</u> or <u>bhāve</u> P.1.3.12-13,77.	Primary endings <u>Parasmaipada</u> and <u>ātmanepada</u>	First person P.1.4.106, Second person P.1.4.105, third Person P.1.4.107	Singular, dual, plural P.1.4.21-22, 102
(<u>parokṣabhūta</u>) 'perfect' tense (indicative mood) P.3.2.105, 115	-do-	<u>1 (iṭ)</u> P.3.2.105, 115	-do-	special set of endings (indicative) P. 3.3.15	-do-	-do-
<u>anadyatana-bhaviṣyat</u> : 'Periphrastic future tense' P. 3.3.15	-do-	<u>1 (ut)</u> P.3.3.15	-do-	Primary endings	-do-	-do-
<u>bhaviṣyat</u> : 'future tense' P.3.3.13	-do-	<u>1 (ṛt)</u> P.3.3.13	-do-	-do-	-do-	-do-
<u>Liṅārtha</u> : 'Subjunctive mood (having optative value)' only in the Vedic language. P.3.4.7.	-do-	<u>1 (eṭ)</u> P.3.4.7	-do-	-do-	-do-	-do-
<u>vīdhvādi</u> : 'command etc. (imperative mood)'m P.3.3.161	-do-	<u>1 (oṭ)</u> P.3.3.161-63	-do-	-do-	-do-	-do-
<u>anadyatanabhūta</u> : imperfect tense (indicative mood) P.3.2.111	-do-	<u>1 (aṅ)</u> P.3.2.111	-do-	Secondary endings <u>Parasmaipada</u> and <u>ātmanepada</u>	-do-	-do-
<u>vidhyadi</u> and <u>āsis</u> : (optative and precativ moods', P.3.3.161-162, 173.	-do-	<u>L (iṅ)</u> P.3.3.161-62 173.	-do-	-do-	-do-	- d o -
<u>bhūta</u> : completion of action (aorist tense indicative mood)'. P. 3.2.110	-do-	<u>1 (uṅ)</u> P. 3.2.110	-do-	-do-	-do-	- d o -
<u>liṅnimitta</u> : 'having optative value (conditional mood)'. P. 3.3.139	-do-	<u>1 (ṛṅ)</u> P.3.3.139	-do-	-do-	-do-	- d o -

The symbol l stands for all the finite suffixes of tenses and moods. The symbol † and ñ provide for the primary and secondary endings respectively. The symbols at it ut etc. stand for the abstract representation of the present, perfect, future, etc. The abstract structure represents the elements that generally turn up in surface structures as verb-endings and participle endings (for instance, ti, tas, anti P.3.4.78 or present participle suffixes at, āna etc. P.3.2.124). The abstract terms provide for the tense-mood variation, and for syntactic meanings (like Kartari, Karmani, Bhave, etc.). The surface-endings : ti, tas, anti etc. cover each of them semantic distinctions: voice, person, and number. This set of surface-endings is optional. We can also have the alternative endings ta, ātām, anta depending on the semantic situation.

For the present tense (la†) Pāṇini uses the term vārtamāna (P.3.2.123) which refers to continuous action. Pāṇini who has not used the term Kāla 'time' in connection with tenses, probably considers that the present, past and future are more aspectual categories (Pāṇineh, akālakani vyākaraṇam : 'Pāṇini's grammar is without the grammatical notion of time', Kāśikavṛtti on P.2.4.21).

The present tense denotes the durative aspect of action. P.3.2.102 prescribes li† in the sense of completed action (bhūta and niṣṭhā) for the vedic language with a bearing on the present situation. For the post-Vedic language, P.3.3.115 prescribes li† to denote a completed action which has not been witnessed by the Speaker. P.3.3.15 prescribes lu† : 'periphrastic future' to denote the aspect 'non-immediacy of action' which is going to take place at a definite time to come. P.3.3.13 prescribes li† to denote undefined future action. P.3.4.7 equates le† ('subjunctive mood') with the optative (liñ) P.3.4.8 states that the subjunctive is used to express upasanivāda (attitude of) certainty', and āsankā 'attitude of probability'. P.3.4.111 prescribes lan ('imperfect') to denote action completed at a definite time in the past. P.3.3.161-162 prescribes lot (imperative') and lin ('Oplative') to denote 'command' 'instructions', obligation', 'duty' etc. P.3.3.157 & P.3.3.173 assign the additional meaning 'wish' to lin and lot. According to Pāṇini, there is no sharp line of division between the imperative (lot), (subjunctive (le†) and optative (lin) P.3.2.110 prescribes luñ (aozist) as denoting the completion of an action. P.3.3.139, prescribes lzn in the optative value to indicate that something is going to happen without any result.

Pāṇini treats the model forms belonging to the present system only, because in the post Vedic language the modal forms are restricted to the present system. The model forms which belong to the perfect and aorist systems and occur mainly in the Vedic language are not recognised as such by Pāṇini. These forms are accounted for by the theoretically unsatisfactory devices indicated by words like bahulam : 'variously' and vyatyaya : 'transportation'.

10. Grammatical categories.

Pāṇini treats the inflexional grammatical categories : 'number', gender, 'person', 'tense', 'mood' and 'voice', although he has no specific term for the grammatical categories. The categories of 'tense' and 'mood' have been already explained.

10.1. Person.

Pāṇini treats person as a category of the finite verb which is marked by the triplet-endings of the verb. For instance, mi 'I' -vas : 'we both', -mas : 'we', -si : 'thou', -thas : 'you both', -tha : 'many of you', etc. (P.1.4.101). The first person is used when the verb syntactically agrees with the word referring to the speaker himself (P.1.4.107): the second person, when the verb agrees syntactically with the word referring to the hearer (P.1.4.104), and the third person, when the verb syntactically agrees with a word referring to something other than the speaker and hearer (P.1.4.108). The selection of person, according to Pāṇini, is controlled by the inflexional endings of the nouns and the corresponding use of persons will be implied even if they do not actually occur in the surface form of the sentence (P.1.4.105-107).

10.2. Number.

Pāṇini accounts for number only where it is grammatically predictable. He defines, 'singular', 'dual' and 'plural' as categories of the inflexional suffixes of verbs and nouns (P.1.4.102). Pāṇini also states that the 'singular' refers to one object, the 'dual' to two objects, and the 'plural' to more than two objects (P.1.4.22-23). He also notices stylistic variations in number. For instance, P.1.2.58 state that a word can be used generically either in the singular or in the plural. The first personal pronoun asmad, when it is employed in speaking of two persons, is used in the plural as well as in the dual (P.1.2.49). When the number distinctions are arbitrary, Pāṇini does not treat them. For instance, āpaḥ 'waters' dārāḥ : 'wife' which are conventionally used only in the plural.

10.3. Gender.

Pāṇini recognises gender as a grammatical category in so far as it corresponds to a formal linguistic structure. It has no necessary correspondence with the physical properties of objects denoted by nominal expressions.

Pāṇini treat 'masculine', 'feminine' and 'neuter' variations in the inflexional suffixes added to nominal stems. Thus, Pāṇini recognises three noun classes in Sanskrit. Apart from this he accounts also for the gender of words in so far as it is grammatically predictable. (for instance, P.2.4.17-30, 3.3.18, 4.1.3. etc.) P.1.2.53 states the theoretical principle that 'gender' and 'number' need not be taught because they depend on arbitrary conventions. The Liṅgā-nuśāsana, which singles out words occurring in a specific gender, is therefore, not written by Pāṇini who is interested only in grammatical gender.

10.4. Voice.

According to Pāṇini, the Sanskrit verbe has two voices (P.3.4.69), namely, Active (Kartari) and Passive (Karmani). Again the active (kartari) is distinguished by two sets of personal terminations, parasmaipada : 'a word for another' and ātmanepada : 'a word for oneself' (P.1.4.99-100). The middle voice (ātmanepada) is used when the action is carried out by the agent for his own benefit or interest. For instance, kaṭam Karoti 'he makes a mat' is used when a workman prepares a mat for his own use. Pāṇini also knows that in connection several

and atmanepada meanings is lost. Many verbs are only used in the parasmaipada but not in the atmanepada and vice-versa (P.1.3.12-93).

The passive voice (P.3.4.69) is used in Sanskrit personally (Karmanī) and impersonally (bhāve). When the passive styled Karmanī is reflexively used, it is called Karmakartari (P.3.1.87, 3.1.62). For the passive voice (personal, impersonal and reflexive) Pāṇini prescribes ātmanepada endings. For instance, Rāmaḥ ghaṭam karoti : 'Rāma makes a jar' is called a kartari (Prayoga) : 'Passive voice'. The object of (karmakāraka) of the active sentence becomes the subject (abhihitakarman) in the corresponding passive sentence (P.3.2.46, 2.3.1.). The subject of the active (i.e. abhihitakartr) is not expressed necessarily in the passive. But if it is expressed, it takes agentive instrumental inflexion. (kartari tṛtiya, P.2.3.18). The impersonal passive (Bhāve) is used only in the third person singular without the notion of 'person' and 'number being attached to it. This intransitive passive shows nothing but the nature of activity where no subject can be used. It is assumed that that activity affects the agent in the instrumental case which is not necessarily expressed in the surface form of the sentence. For instance, sthiyate : '(it) is stood', śayyate : '(it) is slept', bhūyate : '(it) is become'. Such usages are not attested in early literature.

P.3.1.87 prescribes the reflexive voice (Karmakartari) if the subject (abhihitakarman) corresponds with the object (Karman) on the transitive verbs in the active construction and the agent of the action and its object coincide. The reflexive passive is equivalent to the passive, as far as the operation of the vikarṇa and the endings, etc. are concerned. For instance, pacyate odanah (svayam eva) : 'the rice boils (by itself)', bhidyaḥ kashtham (svayameva) : 'the wood splits (by itself)'. The middle (ātmanepada) is also used reflexively in Sanskrit (P.1.3.67, 1.3.72-77).

11. Parts of Speech.

11.1. Pāṇini has no term for the "parts of speech". He acknowledges only "two parts of speech" : subanta : 'noun having a case-inflexion' and tiñanta : 'verb ending in the inflexional suffixes'. The common term for these is pada : 'inflected word' (P.1.4.14). These can be further sub-divided according to the requirements of his grammar. Particles (ca and others), proverbs (pra etc.), adverbs, indeclinables are technically subanta in his system because the case-terminations are added to them in the underlying (alaukika) forms (P.2.4.82) which subsequently were omitted in the surface (laukika) forms (P.2.4.82). Pāṇini places all these categories under the single name prātipadika : 'nominal stems' (P.1.2.45). Proverbs and particles come (P.1.1.37) under the wider variety of indeclinables (avyaya) which is a subvariety of the prātipadika class. Pāṇini makes the use of syntactic function, Kriyāyoga : 'connection with an action' in determining the name of the class, proverbs (P.1.4.59). The class of particles (cādis) is negatively characterised as asattva : 'not signifying the notion of substance' (P.1.4.57). Pāṇini's grammar does not vary often require the distinction between adjectives and substantives. But whenever such a distinction is demanded to account for grammatical facts, he separates the category of adjectives from the substantives by the term guṇavacana : 'a term

expressive of qualities' (p.6.1.124, 2.1.30, 4.1.44, 8.1.72) and that of substantives by the terms, dravya : 'substance' (P.5.1.11) adhikaraṇa : 'substance' (P.2.4.15, 2.4.13) and Jāti : 'class'. Pāṇini has no term for adverbs. His grammar does not refer to any specific grammatical function which can bring together all the members of the class of adverbs. He includes them in the class of indeclinables. Thus, he combines the formal categories 'noun' and 'verb' with the notional categories of adjectives, substantives, particles, etc. Whenever such a sharp distinction is needed to restrict the grammatical operation to the particular class of words.

12. Syntax.

12.1. There is specific term available in Pāṇini's Aṣṭādhyāyī equivalent to the modern term 'syntax'. nevertheless, the main task of his grammar is not only to give the procedure of word-formation but also to account for much interrelated with syntactic rules that a completely separate treatment of morphology and syntax is not possible.

According to Pāṇini, all types of word compositions, namely krđvṛtti (like kumbhakārah : 'pot-maker'), taddhitavṛtti (like dāśarathīh : 'son of Dasaratha'), samasavṛtti (like rājapuruṣah : 'king's servant') ekasēsa (like pitarau : 'father and mother') and namadhatuvṛtti (denominative formations like putriya - 'to desire a son'), involve syntactic relations between the various items combined. In the underlying representation of all these formations the case markers indicating syntactic relations are suppressed and subsequently deleted in the derived surface forms. For instance, the value of the first morpheme in Kumbhakārah and putriya - is equal to that of Kumbham and putram, and expresses the object-relation.

The value of the first morpheme in rājapuruṣah and dāśarathīh is equal to that of rājñah and dāśazathasya and therefore they express the genitive relation. Therefore Paninian procedure assumes deletion of case-markers in all these formation.

The manifold relations between nouns and verbs, and the constituents in integrated forms are signified by cases which convey Kāraka relations according to Pāṇini's system. These syntactic relations are divided into six broad groups apādāna : 'moving away' (P.1.4.24), sampradāna : 'handing over' (P.1.4.32), Karṇa : 'means' (P.1.4.42), adhikaraṇa : 'location' (P.1.4.45), Karman : 'which is affected by the action' (P.1.4.49), Kartr : 'agent' (P.1.4.54).

Pāṇini's rules analyse the noun-verb relation in terms of the rules (Kāraka) played by the nominal expressions in bringing about the action. The individual mainly responsible for bringing about the action is called Kartr : 'agent'. What is most affected by the action is called Karman. The most effective means is called Karṇa. The person or thing to which something is handed over is called sampradāna ('recipient'). The source or origin from which something moves away is called apādāna. The location is called adhikaraṇa.

There are seven cases which are recognised for systematically relevant syntactic distinctions. The nominative (prathamā) marks the subject (prātipadikārtha) of the sentence. The vocative (sambo-dhana) which is the case of address, is not distinct

from the nominative excluding the singular. The accusative (dvitīyā) marks the grammatical object of transitive verbs. The instrumental (tritīyā) marks either the most effective means of action (Karana) or the agent (Kartṛ). The lative (catuṛthī) is mainly associated with the notion of giving. The ablative (pañcamī) is associated with the notion of removal (apādana). The genitive (ṣaṣṭhī) marks the residual relation (śeṣa i.e. other than the noun-verb relation, like the possessive relation). The locative (samptamī) specifies location i.e. 'in', 'at', 'on', etc.).

What is stated above works in the majority of cases. But there is no 'one-to-one' correspondence between the cases and syntactic functions. The genitive case may express the possessive relation (rājān, puruṣaḥ: 'king's man', p.2.3.50), the instrumental relation (ghaṭasya yajate: 'he sacrifices by means of ghee', p.2.3.63), the object relation (ghaṭasya Kṛtiḥ: 'making of jar' P.2.3.65). Similarly a particular syntactic relation can be expressed by more than one case. For instance, the instrumental relation is expressed by the instrumental or the accusative in akṣaṇi/akṣaṇ divyati: 'he plays (with) dice' (P.1.4.43). Similarly the same semantic role can be linked with different syntactic categories. The instrumental role or the object role can be recategorised as an agent (abhihitakarṭṛ) depending on the speaker's intention as to how to present the facts (vivakṣa). For instance, Kāṣṭham chidyate (svayaṁ eva): 'the wood splits (itself)' (Karmakarṭṛ: 'object agent', P.3.1.87), Kuṭharāḥ chinatti (svayaṁ eva): 'the axe cuts (by itself)' (Karṇakarṭṛ: 'instrumental agent', P.2.3.46). Thus for the description of syntactic categories Pāṇini does not rely on the surface form of expressions only. The same syntactic category can be linked with different semantic roles and with different case-endings.

Pāṇini lays down the conditions of syntactic relations by several different terms when the concerned operation applies to words interrelated from the point of meaning. The term Samartha in P.2.1.1. implies that finished words can be formally organised within a larger construction only if they are syntactically related. This condition of meaningful combination enters in the domain of rules which formally organise wordgroups in a sentence or elements into a larger construction. The condition Kārake (P.1.4.2) tells us that the case terminations which are introduced through the syntactic labels, Karman, Karṇa, etc., are added only when the nominal stem is connected with a verb-phrase. The words, Yukta: 'joined' (P.2.3.4, 2.3.8 etc.), Yoga: 'connection' (P.2.3.6) and Sākāṅkṣa: 'having syntactic expectation' (P.8.1.35, 3(?). 2.114 lay down the need of syntactic linkage from the effective application of these rules.

Obviously Pāṇini cannot phrase rules which fix the arrangement of words in sentences. That is to say, the order of words is not fixed by grammatical rules. Sanskrit affords much freedom with regard to the order of words in a sentence. The order is determined by features (stylistic, etc.) independent of grammar. But this does not mean that the analysis of sentence-structure is not dealt within Pāṇini's grammar. The rules in syntactic section of the Aṣṭādhyāyī treat of the internal structure of words, and phonological rules explain the phonological form of sentences. The rules on syntax state, how words are functionally combined and organised in phrases or sentences.

13. Compounds

13.1. Pāṇini generally considers that a compound like rājapuruṣaḥ: 'king's man' and its formally nearest word group, rājānpuruṣaḥ have the same underlying syntactic structure. He derives compounds with the help of transformational rules from the common underlying representation (rājan + genitive + puruṣa + nominative). In the course of derivation the inflectional endings are deleted. The whole compound form is considered to be one single lexical item (prātipadika).

Pāṇini knows four broad categories of compounds: (i) avyayibhāva, (ii) tatpuruṣa (iii) bahuvrīhi and (iv) dvandva. Indeclinable compounds (avyayibhāva) fall under the first variety. Tatpuruṣa is a name given to compounds like tatpuruṣa: 'his man' where the first member can occur with various case terminations (vibhakti-tatpuruṣa). The Karmadharaya, which is a variety of tatpuruṣa, shows concord between its two members. For instance, nīlakamalam: 'blue lotus'. A tatpuruṣa compound is called dvigu if its first member is a numeral. For instance, Saptarṣayaḥ: 'seven rsis'. A compound is called bahuvrīhi ('country having plenty of rice a person possessing plenty of rice) or when it conveys a meaning in addition to what is expressed by its constituents. The avyayibhāva, tatpuruṣa and dvandva are endocentric because the constituent structure itself accounts for the meaning and syntactic explanation of the compounds. A bahuvrīhi-compound is an exocentric construction (anyapadārtha 2.2.24) because its constituent structure cannot account for the meaning conveyed by it.

14. Pāṇini's Aṣṭādhyāyī as a generative grammar

14.1. The Aṣṭādhyāyī constitutes a system of rules which account for a large set of expressions. Its machinery consists of technical elements; its input are word-elements, stems given in the Gaṇapāṭha and the Dhātupāṭha and the suffixes mentioned in the Aṣṭādhyāyī; its output are Sanskrit expressions. Since this system allows us to decide the correctness of words derived and at the same time provides them with a structural description, the Aṣṭādhyāyī may be called a generative grammar. It has the essential character of a generative grammar, as its rules are valid for a large set of potential utterances which may have occurred in the past literature or may have been produced by the native speakers of that language.

But in Pāṇini's grammar, the idea of generating one sentence from the items of another sentence with semantic equivalence is not to be found. For instance, the idea to generate a passive construction from an active one, or vice versa is not there. Pāṇini's grammar provides transformation of rules(?) at the level of sentence-formation. Still it offers us a procedure to arrive at actual expressions through the successive representation of elements, combined with each other in accordance with an ordered application or rules, which is sufficient proof for admitting its generative character.

14.2 The Ordering of rules in Pāṇini's grammar.

One of the main features of a generative grammar is that its rules are ordered. Rules in the Aṣṭādhyāyī also do not apply in any arbitrary order. In most of the cases the order of application

is considered to be basically predictable. The rules often become automatically ordered because the application of the one, is dependent on the application of the other. Besides this, there are a few conventions which are assumed or stated by Pāṇini. P.1.4.2 states that in case of conflict between two technical terms mentioned in the section, P.1.4.2 - 2.2.38, the latter one prevails.

Another basic simple convention assumed by Pāṇini is that the general rules (utsarga) and the special rules (apavada) are disjunctively ordered and that the special rule prevails over the general rule. The asiddhatva principle, stated by Pāṇini, (P. 3.2.1) implies that the rules in the last three sections (pādas) of the Aṣṭādhyāyī to be applied in the order in which they are stated. After the application of a later rule in this section, the application of an earlier rule is prevented. The asiddhatva principle stated in P. 6.4.22 implies that, in connection with rules mentioned in the ābhāt section (P.6.4.22-6.4.175) the output of one rule cannot be the input of another one.

Besides these there may be a few more general conventions for the ordering of rules about which we are still in the dark.

15. Vedic rules and accent rules

15.1 A large number of Pāṇini's rules are common to both the Vedic as well as the classical Sanskrit. An analysis of the Vedic and post-Vedic Sanskrit is presented together in a single system of rules except where it is restricted to one or the other of these domains. But these common rules are organised according to structure of the classical Sanskrit. For instance, the ten tense/mood categories (lakāras) are an appropriate device for analysing the post-Vedic Sanskrit. But they are incapable of representing a classification of the varieties of voices, tenses and moods of the Vedic language.

The Vedic rules, which seem to have been borrowed from several sources appear to have been inserted in the appropriate contexts and pasted together with non-Vedic rules. If the Vedic rules are taken away from the body of the grammar one can scarcely notice from the remaining structure that there is a lacuna, which would indicate or justify their original presence there.

No doubt Pāṇini has minutely observed the grammatical peculiarities of the important Saṁhitā texts. But instead of treating those at length he prefers to make generalizations in terms of vyatyaya: 'divergence'. bahulam : 'variously' (P.3.1.85, 7.1.10 etc.) Out of 3983 rules in the Aṣṭādhyāyī 270 rules are devoted to the Vedic literature; but Pāṇini could not give a fixed grammatical system which would account for both the Vedic language which show an unmanageable variety of forms and the classical language. The complication of the Vedic Sanskrit inflexion (case-terminations and verb-ending suffixes) is briefly described in P.7.1.30-46, 50. The whole series of Vedic infinitives which do not survive in the later Sanskrit, have been covered in P.3.4.9-11. Thus, Panini could not organise his grammar according to the structure of the Vedic Sanskrit which shows a bewildering diversity of inflexions, tenses, moods, Sandhis, etc.

14.2 Accent rules

The Vedic Sanskrit had three distinctive pitches high (udātta), low (gnudātta) and compound (svarita). The post-Vedic Sanskrit also had preserved this tonic accent which did not service after the beginning of Christian era. Most of the Pāṇinian rules dealing with accent are common to both the Vedic and Post-Vedic phases of Sanskrit. Pāṇini devotes 380 rules to a systematic study of accentuation of the secular as well as the Vedic speech. Panini gives rules of accentuation for individual words, roots, suffixes, compounds and sentences.

Accents in verbs and primary and secondary derivatives are often indicated by the it-markers (anubandha) attached to the suffixes. In fact, derivation of nominal and verbal forms in the Pāṇinian system without fixing the accent is well-nigh impossible. In his system accent is an inseparable element of morphology.

It would be wrong to think that all of Pāṇini's accent-rules are to be utilized for determining the Vedic accent alone. These rules like the rest of rules in his grammar, are intended to be applied to both the Vedic and the classical Sanskrit. Pāṇini's Aṣṭādhyāyī is an acknowledged authority on accentuation of the Vedic and post-Vedic Sanskrit.

16. Two methods of studying Pāṇini

16.1 According to tradition, there are two ways of studying the Pāṇinian system : the analytical way (yathoddeśa) and the syntactic way (Kāryakala)

The first method shows that the rules of Panini are to be studied following the order of rules as given in the text of the Aṣṭādhyāyī. The arrangement of the rules in the text is mainly based on the devices of anuvṛtti : 'chain technique' and adhikāra: 'Section'. If the rules are detached from the text they are wholly unintelligible.

The Kāśīka commentary on the Aṣṭādhyāyī (700 A.D.) interprets the rules in the order in which they are given. The second method insists that the rules are to be interpreted together with each other, forming a connected idea for the process of grammatical operations. Thus, for instance, if we critically examine the very first rule in the Aṣṭādhyāyī, we find that it is unintelligible without knowing numerous rules which are still to come. We will not be able to demonstrate the ordered application of rules if they are studied in isolation without implying them in the specific stages of derivation. In the Siddhānta kaumudī (17th Century) special emphasis is laid upon the generative aspect of the system.

The first method examines the theoretical part of the system while the second method throws much light on the experimental side of it. These two methods combined together give a complete picture, i.e. knowledge of the theoretical and experimental aspects, of the Pāṇinian procedure.

17. Concluding remarks

Pāṇini's Aṣṭādhyāyī is unintelligible without the help of commentaries upon it. A large portion in the traditional interpretation appears to be absolu-

tely correct. These commentaries contain a vast amount of brilliant scholarship and subtle insights. We must gratefully accept their help. But they cannot replace out independent judgement an interpreting Pāṇini. Modern Pāṇinian research has adopted a critical and historical approach to the interpretation of Panini. Several life-times of work would be needed to fully appreciate Pāṇini's genius which has brought the grammar of Sanskrit and the methodological assumptions behind the system to their perfection. Pāṇini has analysed the Sanskrit language with an accuracy and insight, never again found in the history of linguistic studies until the advent of the 20th Century. This is sufficient evidence to confirm Bloomfield's tribute ("Language", London, 1935, P.11) that Pāṇini's Grammar is one of the greatest monuments of human intelligence.

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London Calling

TAJ MAHAL AND THE GREAT BRITISH CONSPIRACY

PART 5

Period: 1907 to 1921

1907:

W. Irvinse of the Bengal Civil Service translates Manucci's "Storia Do Mongor". Manucci an Italian adventurer, lived in India from 1656 to 1708. In volume I pages 182/183 we find - "..... and God willed that before they arrived there the queen Taj Mahal should die. Shahjahan gave orders for the construction of her mousoleum opposite the royal palace at Agrah with great expenditure. It is in two stories, in the lower being deposited the body of his beloved wife. No one may see this sepulchre, for it is in the charge of women and eunuchs --" (And yet Berrier and Tavernier saw it ? Taj Mahal is not opposite Agra Fort but 1 1/2 miles South-East of it.)

Entrance of Indians into Transvaal, S. Africa was restricted.

1909:

H.G. Keene's "Handbook to Agra" was rewritten and brought uptodate by E.A. Duncan, C.E., F.G.S. Information about Taj Mahal is given on pages 147 to 179.

p 148 This is also popularly known as Taj-Bibi-ka-Rauza or simply as the Rauza. The name Taj Mahal unknown to early writers is either an abbreviated form of Taj-i-Mahal or a corrupted form of Mumtaz Mahal a title conferred by Jahangir on Arjumand Bano Begam when in 1612 she was married to his son Prince Kharram afterwards the emperor Shahjahan (False - See events of 1905).

When Shahjahan left Agra in 1629 to crush the rebellion of Shah Jahan Lodi the Gover-nor of the Deccan, Mumtaz Mahal accompanied him and died at Burhanpur in Central India in December of that year after giving birth to her 14th child, a daughter named Gauharara Begum. (So according to Keene Mumtaz died in December 1629).

P 149 For six months, her remains lay in a temporary grave at the place of her death and in the meantime a garden at Agra, known as that of Raja Mansingh but then owned by his grandson Raja Jaisingh was selected for her permanent internment. This garden was exchanged for equally valuable state land. (Keene repeats the story told by Havell and M. Ahmed) and her remains having been transferred to it, were laid there; and there they remained, till the tomb where they now rest, was ready for occupation.

We are told by Fergusson that the Tartars from whom the Indian Mughals are descended "built their sepulchers of such a character The usual process is for the king building crowned by a dome the central building is called a baraduri when once used as a place of burial, it vaults never again resound with festive mirth".

An inversion of this order is observable at the Taj, for two baradaris and other accessories of

a pleasure resort were provided after the burial here of Mumtaz Mahal (these baradaris are in fact drum houses or Nagar Khanas. Once again Keene does not reproduce the cross-section from Fergusson's book).

p 150 The emperor having brought his campaign to a successful issue returned to Agra in 1631 and forthwith invited designs for the Taj, the foundations of which were commenced towards the end of that year (So Mumtaz died in December 1629, Taj Mahal foundations started December 1613). Father Manrique a Spanish monk of the Augustinian Order who visited Agra in 1641 states ".....", then Keene discussed various arguments and says on page 151 "weighing therefore pros and cons, it seems not improbable that the Taj was actually designed by Geronimo Verraneo, on lines suggested to him by existing Moghal buildings such for instance as Humayun's Mousoleum at Delhi which is in fact believed to be the prototype of the Taj (But what buildings in Italy did he design before ? Keene has no answer even after 21 years).

p 152 But after the death of Verraneo, the construction except the pietra dura was doubtless continued wholly by Asiatics.

p 153 As the Taj was commenced at the end of 1631 and completed at the end of 1643, it was 17 years under construction and during the time 20,000 workmen are said to have been employed on it daily for whose accommodation a small town was built adjacent to it and named after the deceased empress Mumtazabad: now known as Tajganj.

Keene then states that dates on various parts are dates of completion of those parts.

p 154 ... In the footnote Keene says - Tavernier commenced his first voyage in 1631 and after travelling from Constantinople to Ispahan in Persia, returned to France in 1633. He did not therefore see the commencement of the Taj, but he may have heard of it at Isapahan. His fourth voyage from 1651 to 1655 was to India and it was then that he saw the completion of the Taj. (We have already pointed out that this is false. See events of 1893 and 1905). -pp 154/155 - Keene repeats that the labour was forced and cried out in sheer despair "Have Mercy God on our distress For we die too with the Princess"

He takes Moin-Ud-din Ahmed to task.

pp 155/156 - Keene deals with possible cost and admits - A further complication is mentioned by Tavernier as follows - The scaffolding is held to have cost more than the building, for not having enough wood they had to make it of bricks and also the centering of the vaults.

pp. 156/157 - Here Keene gives opinions of Bernier, B. Taylor, Fergusson and Sleeman.

pp. 157-158: Here we find some adverse criticism of Taj Mahal.

Taj Mahal proper is described on pages 159 to 179.

p. 160 - We find map of Taj from river Yamuna (Jamna) to Tajganj, there are no dimensions, there is no scale but it seems to be 1 inch to 437 ft., R.F. 1/5244. (The scale is odd, non-standard one). This map has been repeatedly copied by others. Keene does not tell us how he obtained it. On the left wall, we see tanks for water supply of garden.

p. 161 - The court contains an enclosed court at its North-East and North West corner originally of the same dimension, as was also the high basement at its South East and South-West corner bearing the tomb of Sarhandi Begum and the tomb popularly assigned to Satiunnisa Khanam respectively - Keene repeats the usual story about the second lady the tomb reached by a staircase on the North (So they buried on top of the hill!) Sarhandi Begum one of the wives of Shahjahan, probably a native of the village of Sarhandi in the Agra District. (that would make her a concubine not a wife - Other authors say that she was a Persian Princess!). pp.162/163 : Keene admits that the Main Gateway has three storeys. There were originally it is said two silver gates which cost Rs.1,27,000 and were studded with 1100 nails each with a head made of a Souat rupee, these gates were melted down by the Jats when they sacked Agra.

..... a first floor room West of the hall has, at the instance of Lord Curzon been lately converted into a Museum. The exhibits now on view are ancient plans of the Fort and the Taj, photographs of Taj at various times etc. (What happened to them?)

p. 164 : The Baradaris ... A saint is said to be buried at the foot of the staircase at the North end of the Western baradari to whose memory offerings of flowers may be seen there. (A saint buried in this Mausoleum?).

p. 165 : The temporary tomb of Mumtaz Mahal --- It is here that the remains of Mumtaz Mahal were interned under a temporary dome when removed from Burhanpur where they had lain for six months after her death in December 1629, and here they remained till the tomb where they now repose was ready for their reception. When they were finally removed to this tomb, is not authoritatively known but this could not have occurred before its completion of which an inscription gives the date 1048 A.H. (1639 A.D.). It is improbable that they were permanently buried while the tomb was under construction, for the sacrilege of workmen crowding about the grave of the empress would not surely have been permitted by Shahjahan. It is therefore probable that the remains of Mumtaz lay in the temporary tomb near the masjid for about nine years. (Why was it not demolished when the permanent resting place was ready? It must have looked odd in the garden).

p. 166 : Keene describes old method of watering the gardens.

p. 169 : The tomb two-storeyed and built entirely of marble is a square of 186 ft. in plan. (False : The marble is used only as a lining, the main construction being of brick work) Only 14 chapters of the Koran are inscribed in various parts of the Taj and not the entire book as popularly believed.

p. 170 The Cenotaph Chamber The archways

at the cardinal points are closed by glazed screen, (Keene then dismisses the story of golden railing which was, for fear of theft, removed and replaced by present day, Marble screen. The reason? Bernier was a keen observer, he says nothing about the marble screen. See events of 1910).

p. 171 An earthquake in 1803 caused cracks in the floor of the Cenotaph Chamber and the tradition goes that these were filled up with silver but of this, no trace remains (Neville) Note - This shows how useless and unreliable the traditions are. British captured Agra in 1803. So who would fill up the cracks in floor, with silver?).

p. 173 The Mortuary Chamber reached by a descending staircase, the entrance to which is 7 1/4 ft. by 4 ft. was once closed by a silver door subsequently looted by the Jats.

p. 174 The names of some early restorers of the Taj are inscribed on the spike of the main dome, including that of Colonel Taylor with a date far back in the last century. The names of its later renovators, Heath and Alexander, are also inscribed on it.

p. 176 The Masjid and a Zanana chapel on the North divided by a handsome marble rail. (Note-Only Keene mentions this. It does not exist today).

p. 177 : The Jamat Khana :

----- In the tower at the end of the North Wing a staircase descends to the river and by it is reached a passage said to be part of a tunnel between the Fort and the Taj (this was never explored). At the North end of the Platform before the Jawab is a delineation in slate inlay of a vertical section through the gilt spike, crowning the great central dome of the Tomb. It is 30 ft. 6 1/2 inch in length, which, by an angular measurement taken by an officer of the Royal Engineers, the spike in position on the dome was found to be 30 1/6 ft. (30 ft. 2 inch). The Jawab was converted into a residence for Europeans, which was many years ago, rented by Govt. for short periods to honey-mooners & others; but owing to the popular outcry against this desecration the practice was discontinued.

The Basement Rooms :

..... Each entrance is now guarded by a low lattice rail of sandstone.

.... Whether they originally opened on to a ghat and admittance to the Taj from the river or being provided with windows were used as cool resorts during the heat of the day, cannot now be decided. If former they may possibly have at some time been inundated by a high flood in the river and this threatened danger to the foundations of the tomb may have led to their being closed up. The presence of sand on their floors somewhat favours this view. The Jamuna has often inundated the riverside rooms at Itiamud-ud-daula. (Keene does not seem to be aware of the true geography. There is a platform 4 ft. wide running along the river front and there are steps from it to the river level. It is 17 ft. below the floor level of the Basement Rooms. From time to time, it lies hidden under river deposits. It was seen in 1825, went under

the deposits, exposed in 1934 and was visible as late as 1964 but lies hidden under the deposits again today).

p. 178 : The hand of time has not injured the Taj half as much as the rapacious pilferings by Jats and Mahrattas ... but under British rule most of the stones and germs extracted from the pietra dura have been replaced and about £. 50,000 have been spent on renovations. Description such as its illumination in 1876 with electric light and Chinese lanterns on the visit of Prince of Wales (later King Edward VII) are no longer permitted and it cannot now be used for garden parties, bazar and dances. The only gatherings allowed within its walls are on the occasion of the Muhammadan festivals of Id-ul-fitr, Id-ur-zuha and Shab-barat, on the Hindu Dasahra and Diwali and for the annual flower shows in March.

Information elsewhere in the book :

There are references to Nevill and Latif on pages 14, 66 and 112.

Opposite page 73, we find a map of Agra contonment, city and environment drawn to a scale of 1 1/2 inch to 1 mile. Sir Thomas Herbert visited Agra (p28). (This is false). Keene seems to be quite aware that the (so-called) Mosques in India face the West and not Mecca (P 106) but we have to wait 75 years before anyone noticed this vital point.

- Indian Councils Act (Morley-Minto Reforms). Seperate electorates for Muslims were created and the principle of seperate representation for Muslims was enshrined for future reforms.

-Tazuk-i-Jahangiri Part I was translated by A. Rogers and edited by H. Beveridge.

- The life and work of Syed Ahmed Khan by Major General Graham (new edition) was dedicated to the Duke of Connought.

-In London Savarkar's "India's war of Independence 1857" was prescribed even before publication. First attempt by an Indian to reject British version of Indian Hisotry and write true history.

- In London Madanlal Dhingra assassinated Sir Curzon Wyle, Adviser to the Secretary of State for India.

1910:

- Centenary of Captain Taylor's first known repairs to Taj. Still no Archaeological survey of Taj Mahal.

- Fergusson's "History of Indian and Eastern Architecture" was edited by J. Burgess (Indian Section) and R.P.Spiers(Eastern Section).

In the preface Burgess tells us.

- The resources of the Archaeological survey of India were placed at the disposal of Fergusson in 1875.

- He himself was intimate with Fergusson for 20 years.

- The Archaeological survey of India have collected vast stores of drawings only a fraction of which

has yet been published. (There has been no change in this position even today).

I. Volume II: We find the name Taj Mahal changed to Taj Mahall without any authority.

p 306 footnote "Taj Mahall - most probably by Ali Mardan Khan, a Persian refugee". No explanation is given.

p. 315 : The cross-section through the central edifice is reproduced. But Burgess does not explain or even mention the sealed chambers and storeys. He also does not mention the 22 basement rooms discovered in 1903.

p 316 footnote : "From its design I cannot help fancying that this screen (around the cenotaph) was erected after Shahjahan's death. It is not mentioned in Bernier's account (Travels, Constables' edition p 298) The apartment had two silver doors, said to have cost 1,27,000 rupees; which were carried off and melted by Surajmali's Jats when they sacked Agra in 1761" (Note : Bu-rgeess's logic is very straightforward. The screen was not there because Bernier does not mention it. But even though he does not mention the two silver doors, they must have been there as Jats are said to have looted them ... And such a man was the Director-General of Archaeological survey of India, Keene puts forward same argument in 1909.

Burgess gives an example of how the British tried to camouflage the conversion of temples into mosques by Muslims. In Book VII, Chapter V page 236 footnote he says ".... The finials of all the early domes and minors in Gujarat bore the pippal leaf, but when this mosque (i.e. Mosque of Muhafiz Khan) was repaired by the public works department about thirty years ago (i.e. in 1880) the Turkish crescent was substituted." WHY?

- 11th edition of Encyclopaedia Britannica. A small (4x4 inch) photograph of the central edifice is seen for the first time. There is reference to Fergusson's "History of Indian and Eastern Architecture" but the vital sentence " when used as a garden palace..etc." is (deliberately) deleted.

It asserts that Ustad Isa was the Architect. It also adds "the common belief that Austin Burdeause was the Architect was probably incorrect..." The year 1632 is mentioned but it is not clear what it implies.

For some mysterious reason Tavernier, 20,000 men and 22 years suddenly disappear and remain so for next 54 years.

Surprisingly enough under Architecture (Vol.I pp 369 to 444) R.P. Spiers describes various styles "Egyptians, Assyrian Roman Byzantine etc. even Mohammedan, but NOT INDIAN. Why should he want to create an impression that there was no such thing called Indian Architecture? He himself edited the Eastern Section of Fergusson's "History of Indian and Eastern Architecture" in the same year.

- 2nd edition of Les Civilisation de l'Inde by Le Bon (Gustave) was published. In chapter 7 - the Monuments of India, he tells us - "Nowhere in India

does the observer find those periods of gestation always reveal. In some regions he will find that monuments appear suddenly at one point in history, increase in number for two to three centuries and then abruptly disappear. Their appearance in history was preceded and also followed by the most total obscurity" (See English translation by David Macrao, published by Minerva Publications of Geneva, Switzerland, 1974 p 103). This vital point has been ignored by historians.

- Governor of U.P. writes to Viceroy Lord Minto "I have felt frightened lest the lawyer party mainly consisting of young and irresponsible persons would attain a predominant position in the (Muslim) League, and that they might at some time coalesce with the advanced Hindu politicians against the government on one or more questions and later on rue the fact that they had done so. I think that the Aga Khan has put an effectual check to this, and that the (Muslim) League may be expected to be much more conservative and stable than it once promised to be."

(Ref.: "Pakistan - Military Rule or People's Power" by Tariq Ali Jonathan Cape of London, 1970 page 27).

- Father H. Hosten's article "Who planned the Taj?" was published in the Journal of the Asiatic Society of Bengal, new series Vol.VI June 1910. p281 : He stoutly defends Monrique's contention that the Architect of Taj mahal was an Italian - Verroneo. (See events of 1927).

- Edward VII dies, George V becomes King - Emperor.

- Savarkar brothers sent to Andaman Islands to serve Transportation for Life.

- Historian Setu Madhavrao Pagdi was born.

1911:

E.B. Havell denounces the evidence of Monrique as the Anglo-Indian legend. (Journal of the Royal Society of Arts - Jan.1911 page 180).

"History of Fine Arts in India and Ceylon" by Vincent Smith was published. He describes Taj Mahal on pages 412 to 419. He says - "the Taj comprises the central mausoleum, the mosque...."

The purpose of all was to honour the memory of Shahjahan's well-beloved wife whose title Mumtaz Mahal has been corrupted in to Taj (False. See events of 1914). Outside the enclosure a considerable town grew up named Mumtazabad, now represented by Tajganj (False. See events of 1905).

... the wondrous tomb destined to give her immortal fame was begun early in A.D. 1632. When the plans had been settled to the Emperor's satisfaction work was pushed on with eagerness (How interesting. The emperor came to Agra on 1 June 1632 but the work started few months earlier and the plans were finalised afterwards) some 20,000 men being employed daily. On 6 Feb. 1643 the anniversary of the death of the Empress the annual funeral ceremony was celebrated at which the new Mausoleum was regarded as complete.

both the commencement and completion of the buildings that operations did not cease finally until 1653 nearly 22 years after they had begun. (False. See events of 1893).

--- Shahjahan planned for himself a mausoleum of equal magnificence to be erected on the opposite side of the river and united with the Taj by a marble bridge but his family troubles prevented the realisation of this gigantic conception.

(Note : Tavernier says just a bridge - Smith says marble bridge).

---- Much interest attaches to the question 'Who was the architect and to what nation did he belong?'. 'I approach it simply as a case in which evidence should be weighed and appraised impartially. (Of course. Have the British scholars ever done otherwise?).

Sleeman's notion that Austin de Bordeaux, a skilled French engineer and craftsman employed by Shahjahan is certainly erroneous. (Amazing .. Smith edited Sleeman's book in 1893 and 1915 but he does not make this comment there. He also invents Bordeaux the engineer)... and the fact that Vewroneo's body was removed to Agra for burial indicates that he must have been a person of considerable importance and specially connected with Agra. (What a logic. The reason is simple enough. Father H.Hosten tells us "Veroneo's body must therefore, have been brought to Agra, a not uncommon practice in those days among the Catholics in the Mughal Empire, for the Agra Cemetery was apparently the only one in the Empire about 1640. Catholics of a later date, who died at Delhi, were brought to Agra, even when Delhi had already a cemetery of its own. Ref: Travels of Fray Sebastian Manrique, translated and edited by Lt.Col.C.E.Luard and Father H.Hosten, 1927 Vol.II p174).

I have no doubt that the good Father's (Manrique's) positive assertion that Veroneo was the architect of the Taj was made in perfectly good faith, and indeed, nobody impugns his personal veracity (Note: Manrique's book referred to above does just that. See events of 1927).

On the whole, after considering all the arguments, including those drawn from the silence of other authors, I do not see any reason sufficient to discredit the positive assertion of Father Manrique... I accept their evidence as proving that Ustad Isa whether he was a Turk or a Persian, was the chief architect during the later stages of the construction... I abide by the opinion expressed by me in 1893 that the incomparable Taj is the product of a combination of European and Asiatic genius. It should be observed that no authority ascribes the design to an Indian Architect. The credit belongs to either or both of the two foreigners, one a Venetian, the other most probably a Turk.

In a footnote, Smith admits".... The number (20,000) rests on Tavernier's excellent authority. According to manrique the staff of workmen numbered only 1000 in 1640. No doubt the numbers varied much from time to time (Smith deliberately suppresses the fact that both were in Agra at the same time).

..... We know however from Toyernier who witnessed

- In another footnote, Smith refers to Latif's book of 1896.

- Bharat Itihas Samshodhak Mandal (Indian Historical Research Society) was started in Poona.

- 15 Nov. Viceroy Lord Hardinge visits Taj.

- 18 Dec. George V and Queen Mary visit Taj.

1912:

"Anecdotes of Aurangzeb and Historical Essays" by Prof. Yadunath Sarkar was published. He tells us on pages 145 to 150:-

WHO BUILT THE TAJ MAHAL?

Mumtaz Mahal's death.

.... The Begum died of the pain of child-birth, prolonged for 30 hours, at Burhanpur on Tuesday 7th June 1631 (17 Ziqada 1040 AH) Shahjahan was so overpowered by grief that for one week, he could not bring himself to appear at the windows of the hall of audience, or to attend to any affairs of State--(Badishahnama i 387 and Muntakhab-Labab i 459).

The following account of her death is given in a rare Persian Manuscript (the autobiography of Quasim Ali Afridi. On page 150, Sarkar tells us that Afridi was born in 1771 i.e. 105 years after the death of Shahjahan)----- It is said that just before the birth of Dahar-ara a sound of crying was heard in the womb of Mumtaz Mahal. Immediately on hearing it the Begam despaired of her life, summoned the Emperor to her side----- Promise to keep my two last request. The Emperor promised 'on his life & soul' and asked her to state her wishes. She replied "Raise not issue on any other women... My second prayer is that you should build over me such a Mausoleum that the like of it may not be seen anywhere else in the world..." (Duvan-i-Afridi pp 226 to 23a) (Now we know how Col. Sleeman got the story for his book. A lady in pain for 30 hours made those requests ...)

But the above is merely a popular legend. The contemporary historian Abdul Hamid Lahori (author of the Padishahnamah) is silent about it. (Note: Afridi has not even got the child's name right. Her name was Gauhar-Ara).

THE TAJ, ITS BUILDERS AND STONES

A special tract of land, South Agra city was chosen for the burial place and purchased from its owner Rajaj Jai Singh, the grandson of Mansingh (Padishahnama i 403). Plans for the tomb were submitted by all the Master architects of the land (yet, not one name is given) When one of these was approved by the Emperor, a wooden model of it was first made (Diwani-i-Afridi p 230) (Note- Abdul Hamid Lahori says nothing about this).

Begun early in 1632 the Taj was completed in January 1643 under the supervision of Mukarramat Khan and Mir Abdul karim at an expense of 50 lakhs of rupees. (Muntakhab-ul-Labab i 596 and Padishahnamah ii 322 etc.)

--- Other workmen are named in a recent Urdu work on the Taj but I know not on what authority.

The following 20 kinds of precious stones were set in the Taj. (Diwan-i-Afridi p 236). (Note: How does this Afridi give so much information while Lahori says nothing?).

ITS ENDOWMENT:

On the 12th anniversary of her death (27th January 1643) Shahjahan visited the Taj Mahal and bestowed in waqof 30 villages of the parganahs of Agra and Nagarchin--- The Padishahnamah ii 327 gives a list of these villages. (So that is why Sarkar finishes the Taj so early.)

In the next essay in the book, Sarkar tells us -

p 156.... Sati-un-nisa died on 23 January 1647. Shahjahan was deeply touched and ordered Rs.10,000 to be spent on her funeral- After more than a year (Sarkar does not say when) the body was taken out and finally buried West of Taj Mahal, close to outer quadrangle, in a tomb built by Government at an expense of Rs.30,000 (And yet Sarkar gives no references. If Taj Mahal was ready in 1643, why was her body buried temporarily for more than one year?).

1913:

- "The chronology of Modern India 1494 to 1894" by J. Burgess was published.

- "Indian Architecture - its psychology, structure and history from the first Muhammedan invasion to the present day" by E.B. Havell was published.

- Rabindranath Tagore is awarded the Nobel Prize. Supreme Court in S. Africa declares all Hindu, Muslim and Parsee Marriages null and void.

1914:

The travels of P. Mundy Vol. II - "Travels in Asia" was edited by Lt. Col. Sir R.C. Temple, C.I.E. We note the following:

- Mundy makes no mention of even hearing the death of Mumtaz. There was no mourning in Agra.

- Shahjahan entered Agra with all the pomp and glory on 1 June 1632. There was no sign of sorrow for the loss of Mumtaz (p 188).

- Mundy notes no well foundations. But he says "... There is already about her tomb a rail of gold- The building is begun and goes on with excessive labour and cost prosecuted with extraordinary diligence, gold and silver, esteemed common metal and marble but as ordinary stones... the surrounding hills are being made level so that they might not hinder the prospect of it. (Page 213).

- Mundy stayed at Agra during 1 Jan 1631 to 17 Dec. 1631.

16 Jan. 1632 to 6 Aug. 1632.

22 Dec. 1632 to 25 Feb. 1633.

What the successive historians failed to notice are following lines :-

---- Places of note in and about Agra are the castle, King Akbar's tomb, Taje Moholl's tomb, gardens and Bazar

(In the bibliography we find Latif's book of 1896 and Pelsaert's Remonstrance of 1626. See events of 1928).

- Bernier's "Travels in Mughal Empire" was edited by Vincent Smith. He adds nothing to the footnotes by A. Constable. On pages 294/299 Bernier refers to Taje Mehala's Mausoleum.
- "The English Factories in India (1630 to 1660)" by W. Foster was published. The (English) East India Company had a factory at Agra from 1618 to 1655. And yet there is no mention of Taj Mahal, Mumtaz Mahal or any tomb of Shahjahan's wife, built by him, in their factory records. (Mr. Foster is not surprised and makes no comments). There are however two references to Tajganj (1648 Pages 220 and 299, 1651-54, p 122).
- Tazuk-i-Jahangiri part II was translated by A. Rogers and edited by H. Beveridge.
- John Marshall was knighted.
- Tilak was released from Mandalsy Jail.
- "Komagata Maru" Affair. Indians having complied with strict and quite unreasonable immigration rules were refused entry into Canada (Vancouver).

1914 - 1918 : (First World War)

1915 :

Vincent Smith edits "Rambles and Recollections of an Indian Official" by Sleeman for the second time (after 22 years). He gives some more footnotes-

Burhanpur in the Deccan. After a delay of six months her remains were removed to Agra and there rested six months longer at a spot, in the Taj garden, still remembered. (there is no basis for this spot) until her tomb was sufficiently advanced for the final internment. (No one knows the exact date of the final internment. How interesting !)

.... The testimony of Tavernier is doubtless correct if understood as referring to the whole complex of buildings connected with the mausoleum. He visited Agra several times. He left India in January, 1654, returning to the country in 1659. Work on the Taj began in 1632 and so appears to have been completed about the close of 1653 (Tavernier - Travels translated by Ball Vol. I pp XXI, XXII, 25, 110, 142, 149) (Note: In the 1893 edition Smith says "Tavernier may well have been at Agra in 1653." Now he simply implies that Tavernier went to Agra simply because he left India in 1654.)

p 317 - This statement, though commonly made, is erroneous. The building (Jawab) is named the assembly house (Jama-at-khana) or guest house (mahman khana) and was intended as the place for the congregation to assemble before prayers, or on the anniversaries of the Emperor Shahjahan

or his consort Taj Mahal (Muhammed Latif-Agra p113. See events of 1896) (Note: Smith sees no difference between 'Assembly House and Guest House'. Why should Muslims need to assemble in a building and then proceed to the Mosque just 600 ft. away? Did anyone see and record this peculiar tradition? Do Muslims behave in this way elsewhere in the world? Smith keeps quiet. Keene makes a similar suggestion about Jama-at-khana).

p318 : ... The author's measurements of the quadrangle seem to be wrong. Different figures are given by Main-ud-din (History of the Taj p29) and Fergusson (ed. 1910 Vol.II p313) NO OFFICIAL SURVEY IS AVAILABLE ... The ornamental stones - Main-ud-din (pp 27-29) gives a longer list, from the Custodian's Persian account. (Note-Col. Hodgson who used this "account" nearly 90 years before, says :

"... this manuscript is evidently the fabrication of an imposter." See events of 1843. Smith makes no reference to Col. Hodgson's paper).

p320.. Personally I am of opinion as I was here more than 20 years that the incomparable Taj is the product of a combination of European and Asiatic genius. That opinion makes some people very angry.

p354/5.. " Tradition affirms that Jats melted down two silver doors at the Taj which had cost Shahjahan more than 125,000 Rupees (N.W. Provinces Gazetteer 1st edition Vol. VII p619)..." (Note In the 1893 edition Smith uses the preamble 'unless tradition lies'. Now, 22 years later, he says tradition affirms.)

- Gandhi returns to India permanently. G.K. Gokhale dies.

1916

"Mediaeval India from contemporary sources" - Extracts from Arabic and Persian annals and European travels" by S.L. Poole was published.

- Viceroy Lord Chelmsford visits Taj. (Lucknow Pact between Tilak & Jinnah).

1917 :

- "Akbar the Great" by Vincent Smith was published.

- "A short history of India in the Middle ages 1000 to 1764 A.D." by S.L. Poole was published.

- Dadabhai Naoroji dies. Mr. P.N. Oak is born.

- (Bolshevik Revolution in Russia).

1918 :

N.C. Kelkar's "Marathe Ani Ingraj" discussing why the Marathas lost to the English, was published.

1919 :

"Oxford History of India" by Vincent Smith was published. (Montford Reforms. Jalianwala Bag Massacre).

1920 :

- Bharat Itihas Samshodhak Mandal, Poona starts quarterly Journal.
- "Hellenism in Ancient India" by Dr. Banerjee was published. Yet another attempt by an Indian to challenge European Historians.
- Subhash Chandra Bose stood 4th in the I.C.S. Examination. Lokmanya Tilak dies).

1921 :

- Duke of Connaught visits Taj (February).
- Edward VIII as Prince of Wales visits India (He visited Gwalior-Agra-Delhi.)
- Aligarh Muslim University was founded. (Savarkar brothers sent back to main land India, from Andaman Islands).
- Another edition of Agra District Gazetteer by H.R. Nevill. No change in information on Taj Mahal.
- From 1921/22 all circle reports were incorporated in the Annual Report of the Archaeological Survey of India, which itself ceased with Part I for 1937/38.

Summary of events and explanatory Notes :1. Politics & Archaeology :

We have already seen how these two go hand in hand. 45 years after restarting the Archaeological Survey of India (ASI) no official survey of Taj Mahal was done. And yet no one is surprised, not even Vincent Smith, who was associated with ASI for more than 30 years !

1871 - 72 report was conveniently forgotten. Nobody asked - Why the cross-sections and plans of Taj Mahal obtained by Cunningham were not published.

Burgess, former Director General of ASI confessed in 1910 that though ASI had collected vast storage of drawings, very few of them were published.

2. The British and the Muslims :

In 1909 separate electorates were created for Muslims and immediately the ballroom dancing on the terraces of Taj Mahal was stopped. On 16 Feb. 1909 the famous lamp presented by Lord Curzon, was ceremoniously suspended from the Main Dome, in the cenotaph chamber. But despite all this the British still feared that some young Muslim lawyers may become nationalists. In 1910, ASI divided its various circles into two section : (i) Muhammedan and British

- i) Muhammedan and British Monuments;
- ii) Hindu & Buddhist Monuments.

Need we say which one got more attention? From 1922/23 the annual reports of individual circles were stopped and amalgamated into one report of the whole of ASI. And from them we find that there never was to be any "exploration and research"

of Muhammedan Monuments. Surprisingly enough in the 1910 edition of Encyclopaedia Britannica, under Architecture, we find various styles - Assyrian, Skumerian .. etc. etc. even Mahomedan but NOT Indian.

3. The Conspiracy grows :3.1 Islamisation in disguise :

In 1910 Burgess tells us how under the pretext of repairs, British authorities removed pipal tree leaves (reminders of Hindu origin) and planted the moon crescent on the pinnacles of mosques in Gujrat, to give them semblance of Islamic character. HOW MUCH MORE OF SUCH DECEPTION WENT UNNOTICED AND UNRECORDED?

3.2 Raja Mansingh's Palace :

We have already seen how Raja Mansingh's Palace was changed into a piece of land in 1904/5. Keene refers to Latif in 1909, Smith in 1911/1915, Sir R. Temple in 1914 but not one of them quotes the vital sentence from his book ".... the site chosen for the mausoleum was late Raja Mansingh's Palace..". In 1912 Sarkar does not refer to Latif but blindly follows Main-ud-din Ahmed (1905), cites Badshahnama Vol. I, p403 and asserts that Shahjahan bought Raja Mansingh's piece of land. We have to wait for another 56 years to know the truth.

3.3 The Wooden Model :

Moin-Ud-din Ahmed says in 1905 that a wooden model of Taj was prepared before construction began-Sarkar repeats the story in 1912 and refers to Diwan-i-Afridi. He also tells that Afridi was born in 1771 i.e. 105 years after the death of Shahjahan or 118 years after the alleged completion of Taj. Shahjahan's official chronicle Badshahnama says nothing about this model but it must have been made because Afridi says so! Sarkar had been a Professor of History for 14 years. The British produced professors like Sarkar who in turn guided the present day professors.

3.4 Bogus Tombs :

In the South East and South West corners, we are shown two tombs. Moin-ud-din Ahmed mentions in 1905, Keene shows them on a map in 1909. These are, they say, those of Sarhani Begam and Satiunnisa Khanam respectively. Daniells (1789) and Fanny Parks (1835) ascribe them to Akbarabadee and Futtehporee, known concubines of Shahjahan. THERE ARE NO INSCRIPTIONS ON THE TOMBS. So how did M. Ahmed, Keene, Sarkar and others decide that these tombs belong to the particular ladies? They offer no logical explanation.

Keene says "... That Satiunnisa Khanam was buried somewhere about the Taj is based on good authority (what authority?) but the special assignment to her of this particular tomb has no better foundation than popular belief. Reasons for believing that she was buried elsewhere are given mostly under the headings "The Gambaz Sahelion" and "The Rauzaahelin" "

M. Ahmad and Sarkar tells us the usual story about the same lady. "When she died at Lahore in 1646/47 Shahjahan ordered 10,000 Rs. to be spent

on funeral expenses. She was temporarily buried at Lahore (so on what was 10,000 Rs. spent?) After more than one year she was exhumated and transported to Agra and finally interned in Jilo Khana (of Taj). The building over the tomb cost 30,000 Rs. (and yet it bears no inscriptions)....."

And what about Sarhani Begum? Well, Sarkar says nothing, Keene and M. Ahmad do not know when and where she died; when was the tomb erected (or anything really). Badshahnama does not even remotely mention these two tombs.

3.5 Racial Arrogance :

Smith wanted to emphasise that the Architect was a "foreigner". The natives could not conceive, design and supervise such grand structures. So it does not matter if at first Verrones was in charge and on his death the job was entrusted to Ustad Isa. (Keene agrees). The English translation of Monrique's book was not yet available but Smith and Keene were aware of the unreliability and absurdities of Monrique's accounts. That should have been obvious when he claims to have been the ladies of the Royal Mughal harem, including Shahjahan's daughters and mother-in-law. But there was no limit to the racial arrogance in the heydays of the British Empire. "The very fact that Verrones was a white man, is proof enough that he was the Architect of Taj Mahal. He may have been a goldsmith, so what?" that was the attitude of Smith, Keene and Co.

Keene's about turn is very surprising. In 1874, he said "... The notion that the Taj was designed by Italians may be dismissed at once. Nothing was ever less Italian than the general conception of the building with its simple and even stiffer contour...." By 1909 he says "... weighing, therefore pros and cons, it seems not improbable that the Taj was actually designed by Geronimo Verrones on lines suggested to him by existing Moghul buildings such for instance as Humayun's Mausoleum at Delhi which is in fact believed to be the prototype of the Taj.

3.6 Childish Arguments :

Unable to trace any buildings in Italy which could be attributed to Verrones, Smith puts forward a childish argument "... the fact that his dead body was transported to Agra for burial shows that he was a man of considerable importance and one particularly connected with Agra...." (even then how does this show that he was the Architect of Taj). Father Hosten tells us that this was quite a common practice as the Catholics had only one cemetery, and that at Agra, in those days.

It is astonishing that Smith, having served in the ICS, in UP for 30 years, having reached the rank of chief Secretary to the Govt. of U.P., should make such a childish argument. But thesis after thesis on this and related subjects are full of such arguments, as then, and only then, would the British Professors confer the degrees (M.A. or Ph.D.) on the Indian students. Bhai Paramanand, a contemporary of Veer Savarkar wrote a thesis on "Rise of British Power in India" and submitted it to the London University in 1908 for the M.A. degree. It was turned down. Later, his books on the Histories of

Europe, Maharashtra, Punjab and Rajasthan were all banned by the British. (Ref. Bhai Paramanand "The Story of My Life").

3.7 Tavernier :

By 1889 it became clear that Tavernier went to Agra only twice in the winter of 1640/41 and in 1665. Various authors have stated 1631 and 1653 as the years of (alleged) commencement and completion respectively of the Taj. Tavernier could not have therefore been present at either occasion.

Keene shows some honesty, and by 1909 agrees that Tavernier did not see the commencement, Smith ducks the point and both maintain that he saw the completion in 1653.

Tavernier says 20,000 men Manrique says 1000 men, but undisturbed by this large discrepancy between the accounts of the two eye witnesses (7) Smith says "no doubt the numbers varied from time to time. He ignores the fact that they both were at Agra at the same time. Keene does not mention this discrepancy at all. THIS WAS NOT IGNORANCE BUT DELIBERATE SUPPRESSION OF TRUTH.

3.8 The Cross-section and the Basement Rooms :

Fergusson's cross-section was never studied, reproduced or even mentioned by Keene, Smith, Havell, M. Ahmad or Sarkar. Burgess reproduced it in 1901 (Murray's Handbook to India) but mischievously removed the entire basement floor under the (so-called real grave chamber.

M. Ahmad (1905) and Keene (1909) do mention the discovery of the basement rooms and are at a loss to explain their purpose. Others do not mention this discovery at all.

3.9 The Jats looted the Silver doors :

It is interesting to trace the history of this accusation ever since it was first made by Major Thorn in 1811.

1811: Major Thorn says "the door at the grand entrance was originally of Jasper.

1832: Captain Mundy says "the brazen gates of the citadel were looted by the Jats".

1874: Keene says "... two silver doors cost Rs.1,27,000 studded with 1100 nails each having a head made of a sonat rupee (these were looted by the Jats) ..."

And others have repeated the story ever since. In 1905 M. Ahmad adds another silver door at entrance to real grave chamber. (also looted by Jats) and Keene promptly repeats it in 1909.

Bernier, Tavernier and Manucci visited Taj Mahal after Shahjahan was dethroned, BUT THEY DO NOT MENTION THESE SILVER DOORS. This fact was systematically ignored by Keene, Smith, Havell, Burgess and co. Referring to the marble screen in the cenotaph chamber, Burgess says "...the marble screen was definitely put up afterwards (i.e. after the death of Shahjahan) as Bernier who was a keen observer, does not mention it. "BUT EVEN THOUGH

HE, TAVERNIER AND MANUCCI ALSO DO NOT MENTION THE SILVER DOORS THEY MUST HAVE BEEN THERE AS THE JATS ARE SUPPOSED TO HAVE LOOTED THEM !!! (Keene agrees). Such perverse mentality was thrust upon us.

4. The Awakening:

Until the Jalianwala Bag massacre of 13 April 1919 most Indian leaders, including Tilak had explicit faith in the fairmindedness of the British. Indian History as written by British scholars was therefore accepted without question. Some Hindu intellectuals however had started to realise that such history was false, twisted, and presented so as to demoralise us. They started to protest

- 1907-09 - Savarkar wrote "India's War of Independence, 1857"
- 1911 - Bharat Itihas Samshodhak Mandal, BISM (Indian Historical Research Society).
- 1918 - N.C. Kelkar wrote "Marathe Ani Ingraj"
- 1920 - Dr. Banerjee wrote "Hellenism in Ancient India"
- BISM starts its quarterly Journal.

5. Hindu Muslim Relations & Historical Research:

The awakening was however seriously hampered by the political atmosphere. Hindu capitulation to Muslim demands continued unabated.

- 1916 - Lucknow Pact gave Muslim, seats in elected assemblies, equal to twice their percentage of population (e.g. in U.P. 15% Muslims got 30% seats while 85% Hindus got 70% seats).
- 1921 - In Malbar, Moplas Committed terrible atrocities on Hindus. But Gandhi praised them as "My God fearing brave Mopla brothers ! "His sickening attitude towards Muslims remained consistent till his assassination (Ref. Pakistan or partition of India by Dr. B.R. Ambedkar 1946).
- 1922 - C.R. Das declared that when Congress secured reins of power in Bengal, it would reserve 60% of all new Govt. appointments for Muslims. In Calcutta City Corporation he had already promised 80% of new appointments to Muslims.
- 1923 - At the annual session of the Congress, Maulana Mohammed Ali, the President, walked out when V.D. Paluskar sang 'Vande Mataram' And not one Hindu leader protested.

These are just few examples. It was under such conditions that Mr. P.N. Oak was born in 1917. By the time he was 8, Gandhi openly denounced Rana Pratap, Shivaji and Guru Govind Singh, for resorting to armed struggle instead of practicing Ahimsa (Non-violence). How could anyone even doubt the validity of the Taj legend under such circumstances?

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Survey of Pāṇinian Research

By S. D. Laddu

Preliminary

1. The expression 'Pāṇinian' is to be understood in the present context as 'relating to the whole tradition or system of Pāṇini's grammar'.

2. In spite of the ridicule of being "a small puddle" (gospada) hurled upon Pāṇini's Grammar by the Mahābhārata - Commentator Devabodha (11th C.A.D.) that puddle-like treatment of the Sanskrit language by Pāṇini, and, much more, the studies inspired by that treatment, have proved to be verily oceanic. And the present 'survey' can only take the form of a bird's-eye view (vihaṅgamāvalokana) rather than that of a comprehensive record (śirihāvalokana). This limited record thus omits, for example, contributions on (1) Non-Pāṇinian Grammatical Systems, (2) Un-Pāṇinian Usages, (3) Philosophy of the Language, and (4) Interdisciplinary connections of Pāṇini's Grammar. For, such has been the vastness of researches grown round this Grammar in recent times.

3. Abbreviations used are geneally those of easy understanding and common use in Research Journals and their full forms may be sought from the Volumes of Vedic-Bibliography by R.N. Dandekar. In the case of titles of the Journals, abbreviations are followed by reference to the Volume numbers.

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Sanskrit Outside India

By G. K. Bhat

I wish to furnish some information about Sanskrit studies and research outside India on the basis of my personal correspondence with some professors of Sanskrit and my short visit to Los Angeles in the State of California, USA.

(1) Professor Oscar Botto is Head of the Sanskrit Department in the University of Torino (Italy) and is Director of Indological studies and of the official organ of the International Association of Sanskrit called "Indologica Taurinensia". At his suggestion, I wrote some articles for this journal. Professor Botto is engaged in writing a History of Sanskrit Literature; for this purpose he had asked me to send to him some of my articles and books on the subject of Sanskrit drama, which were not in his possession. Professor Botto has now undertaken a big project of compiling Sanskrit-Italian Dictionary, which projects Dr Dandekar recently inaugurated at Turin.

Professor Gnoli works at the University of Rome. His doctoral work, "Aesthetic Experience according to Abhinavagupta" is a careful and studious attempt to reconstruct, in part, Abhinavagupta's commentary on the rasa-sūtra of Bharata and shed illuminating light on the Rasa-theory. Miss Fabrizia Baldissera a doctorate student from Italy, who had come to Bhandarkar Institute, Pune, was working on an unpublished bhava and I was able to help her in determining the meaning of some obscure passages and verses.

(2) During my tenure as Director, post-graduate and research department, at the Bhandarkar Oriental Research Institute, I had the opportunity of helping some research scholars from abroad who had come to India for specialized studies connected with their doctoral work. I may mention Dr Gary Tubb of Harvard University who was working on "Kalidasa's Kumarasambhava" in the light of Indian theories of Mahākāvya. He earned his doctorate and is now a professor at the Harvard University.

Another researcher from Harvard University, Miss Margaret Kane was working on "the Sandhis and Sandhyāṅgas in Bhavabhūti's Uttara-rāma-carita". I was able to give her more time and substantial help, thanks to my retirement from active service. I understand that she has submitted her doctoral thesis.

What impresses me about these researchers is not only their keen and deep interest in Sanskrit studies but also their desire to enter into the subtle and intricate aspects of Sanskrit Sastras. The doctrine of Sandhis and Sandhyāṅgas is not easy to understand; and what is particularly difficult is its application to the constructional elements of epic or dramatic plot-structure; here, I have noticed, even traditional Sanskrit commentators sometimes fumble and lapse into unjustified guess-work.

(3) Perhaps my more fruitful contact was with the University of North California. I had gone to Los Angeles for a few months in 1978 to meet and stay with my son who was doing his doctorate in Material Science (Metallurgy) at the South California University. There is a department of Sanskrit at the North California University, in which Dr Hans Peter-Schmidt and Dr Schaffer work. I had known the former through his work, and Dr Schaffer had come to India, sometime in 1970-1971, had met me at the Elphinstone College, Bombay, and had even attended a B. A. Hons. lecture of mine. Dr Schaffer insisted on my coming to the University and speaking to the students. Dr Schmidt teaches Veda; and Dr Schaffer coaches students from initiation into Sanskrit to graduate and post-graduate studies. Besides the usual studies in Sanskrit language and grammar, poetry and drama, the students can learn here some Śāstras too, like the Arthśāstra of Kautilya. There is another department at this University, that of Asian Studies where instruction in Ancient Indian History and Culture, Hindi, and Fine Arts is available. At the time of my visit there were 4 students for the Sanskrit and 12 for the Asian Studies departments. I was suggested to choose a subject of common interest to both the departments. I spoke, for an hour and a half, on the Ancient Indian Theatre and the Technique of Sanskrit drama production. One of the hand-gestures that I demonstrated while speaking about abhinaya, namely, the tri-pataka-hasta which is used for private conversation in dramatic dialogue, was tried by two listeners when, after my lecture was over, I was speaking in private with my son; and the secretary of the student gathering, Mrs Jamison, asked me if I would oblige them by producing and directing a Sanskrit play for them.

The interest, enthusiasm and willingness for hard work which people outside India display for learning Sanskrit, its Sciences and Arts, is indeed remarkable. I remember another researcher from America, Dr Farley Richmond, whom I met in Bombay. He was studying Abhinaya-darpana. The South-Indians are traditional experts in hand-gestures used in dance or drama sequences. So, Dr Richmond went to South, stayed in a village, mastered Malayalam because his guru could speak only that language, and completed his studies. These examples should really open the eyes of our politicians who dabble in the sphere of education and of arts. It should also awaken us to revise our commercial attitude to the study of Sanskrit.

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A Few Mythical Elements in the Mahabharata with parallels in the Mythologies of the world

By N. B. Patil

The pamphlet of the seminar has already detailed the lexical meanings of myth and mythology. The sponsors have done well in highlighting the shades of the meanings of these terms. The terms have been discussed by earlier speakers also. I do not want to add anything further as regards the connotation of these terms.

I am, however, interested in the motif - analytical study of the Mahabharata (Mb.) and I have attempted here to trace similar motifs in other mythological works.

Motif is the smallest element in a tale which has the power to persist in tradition. In order to have this power, it must have something unusual and striking about it. For my study, I found three books very useful. They were -

- (1) Hindu Myths - a Penguin Publication
- (2) Classical Mythology by Morford and Lenardon, and
- (3) The Krishna Cycle in the Puranas by Solis.¹

The last book contained some methodological hints which I found useful for the present study.

It is not possible to present an all comprehensive study of all the myths in Mb. on the present occasion and so I have to be selective. I could not also follow any particular order in the selection of these myths.

Indra

Indra is an important deity in the Hindu pantheon, abundantly praised in the Rg.Veda. In the Mb. also Indra's episodes are narrated in a number of places. There is no point in describing all these episodes here. But I would like to point out similarity in a few motifs in similar characters in the Greek mythology. In the Mb. it is mentioned that Indra developed a thousand eyes after seeing Tilottama² (Adi Parvan 210-27).

Tilottama was created by Vishwakarma to set at fight the two demons Sunda and Upasunda. When the gods saw Tilottama, they were wonder-struck, but Indra developed eyes all over his body to watch her closely.

In the Greek mythology, there is a mention of Argus³ who had hundred eyes of which only

two could sleep at a time. The remaining 98 could keep a watch over To. He was called Argus Panoptes meaning 'all seeing'. Hermes was sent by Zeus to rescue To. Hermes lulled all the eyes of Argus to sleep by telling him stories and then cut off his head. As there is a belief that Indra transferred his eyes on peacock's tail, so is the belief that Hera set Argus' eyes in the tail of the peacock. In another tradition, Juno is said to have put the eyes of Argus in the tail of the peacock. Peacock is sacred to Saraswati, the deity of learning; similarly peacock is sacred to Juno. But the deity in the Greek literature, parallel to Saraswati is, Minerva. She is a goddess of all activities involving mental skills. Her name is evidently derived from the Latin words for mind and remembering, mens and memini. Here also the similarity of the word mens and manas (Sanskrit) is worth noticing. In the Greek literature Minerva is said to be the goddess of school children. Here also the connection between language and myths is thus significant.

Kinnaras

In the Sabha parva of Mb. there is a mention of Kinnaras. They are said to be present in the Kubersabha⁴. They are a category of yakshas. These are mentioned in later Mahakavyas also (Cf. Kumar S. of Kalidasa). Kinnaras are partly men and partly horses. They are master singers as well. In the Greek mythology there are similar creatures who are called centaurs. These creatures have the upper half of man and the legs and the body of a horse. In the Hindu mythology the Kinnaras are benevolent beings but in the Greek mythology they are depicted as violent beings, the only exception being that of Chiron. Chiron⁵ was wise and gentle and skilled in medicine and music.

Here again we are apt to compare Chiron with Ashwinikumars. These are mentioned at a few places in the Mb. In fact they have their origin in the Rg.Veda, but the Mb. mentions them as the sons, born of Sanjunya, (daughter of Twashta) by the Sun in the space. Their individual names

1. Hindu Myths - Penguin, New York, 1982.
2. Classical Mythology - Morford & Lenardon, New York, 1977.
3. The Krishna Cycle in the Puranas, Solis, Delhi, 1984.

2. महेन्द्रस्यापी नेत्राणां पृष्ठतः पार्श्वतोऽग्रतः।
रक्तान्तानां विशालानां सहस्रं सर्वतोऽभवत्॥
(References to Mb. are from Gorakhpur Edn.)

3. Classical Mythology, p. 349.

4. Mb. Sabha P. 10-14 ff.

किन्नरा नाम गन्धर्वी नरा नाम तथाऽपरे
पुते चान्ये च बहवो यक्षाः ज्ञानसहस्रज्ञाः॥

5. Classical Mythology, p. 163.

6. Mb. Adi P. 34. 66.35; 3.63; 95-63 etc.

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craftsman of gods. He had built Indraprastha for Indra (Adi P.206.25) and had created Varun-sabha (Sabha p.9.2) in waters. He also made push-paka vimana (Vana P.161.37). He had made a bow for Indra viz: Vijaya (Karna P.31.42). He made a charriot for Shiva on the occasion of the burning of Tripura (Karna P. 34. 16-17).

पुत्रस्ते निर्मितः सुभ्रु शृणु याद्वक् शुभ्रानते ।
आद्रित्ये कुण्डले बिभ्रत् कवचं चैव मामकम् ॥
शरणाग्राणां अमेघं च भविष्यति शुचिस्मिते ।

11. Classical Mythology, p. 345.

12. Classical Mythology, p. 395.

were Nasatya and Dasra. Sanjnya had assumed the form of a mare. The tradition, however, says that though these two were born of a mare, they were most handsome and could bestow good looks on their devotees. Madri, the mother of Pandavas invoked Ashwinikumars and they sired Nakula and Sahadeva. Ashwinikumars were said to be expert at medicine and surgery. (Cf. Chiron).

This motif of having sons, begotten by gods and supernaturals is also traceable in the Greek literature. For example Danae, daughter of Acrisius, king of Argon and Eurydice. She has a son by Jupiter. A crisis sets Danae and her child adrift on the open sea. The winds drive them to the island of Seriphus where they were saved by fishermen. The fishermen take them to Polydectes, the king of Seriphus, whose brother Dictys educates the child. This child is named as Perseus. Acrisius sets his daughter adrift because the cracle predicted that he would perish at the hands of his daughter's offspring. On the other hand, in the Bhagawata (X-1-35) the disembodied speech (ashariravani vak) predicts that Devaki's eighth child will kill her brother Kansa. The incident in the Greek myth, on the mother and the child being thrown into the open sea and their being drifted and picked up by fishermen, brings before our mind a similar drifting on the child Karna, begotten by the Sun God before Kunti's formal marriage with Pandu. Karna was picked up by Adhiratha. In the Greek legend Dictys educates Perseus, here in the Mb. Adhiratha brings up Karna lovingly. In the legend of Perseus, Pluto lends him a helmet by which he becomes invisible and succeeds in bringing the promised head of Medusa. Minerva also gives Perseus her buckler i.e., shield. Our Indian hero Karna was endowed with a golden armour (shield) since birth which was a gift from Aditya.¹⁰ In the Ramayana, we have the story of Ahalya, who as a result of a curse was turned into a stone. This motif of metamorphosis is obtainable in Greek legends also. Therein Gorgon Medusa is mentioned. Those who look upon the face of Gorgon Medusa are turned into stone. Perseus turns Polydectes into stone by showing him Medusa's head. Perseus kills Acrisius, his grand father, with a quoit, in fulfilment of the cracle. Quoit is a heavy flat ring for throwing onto a rod. It is thus comparable with Shrikrishna's Sudarshan Chakra, a weapon which he used a few times in the course of his life on the earth. Thus, we find that a study of the motifs in both these mythologies, present before us, a few parallel situations.

Twashta

In the Mb. Twashta is mentioned as one among the twelve Adityas. (Adi P. 65.16). He is born of Aditi by Kashyapa. He is said to be the master craftsman of gods. He had built Indraprastha for Indra (Adi P.206.25) and had created Varun-sabha (Sabha p.9.2) in waters. He also made push-paka vimana (Vana P.161.37). He had made a bow for Indra viz: Vijaya (Karna P.31.42). He made a charriot for Shiva on the occasion of the burning of Tripura (Karna P. 34. 16-17).

A parallel of this motif is found in the Western mythology when we come across the legend of Daedalus. Daedalus is a skilled craftsman and an inventor. He is assisted by his nephew, Perdix. Perdix is supposed to be an inventor of saw. He got the idea of this tool from the back-bone of a fish. Daedalus himself had invented wedge, axe, level, and gimlet. Daedalus is said to be the first artisan to make use of sails for boats. Daedalus' association with vehicles on the sea and Twashta's creation of Varun-sabha in waters is worth comparing. Daedalus is also supposed to have devised the labyrinth for shutting Minotaur. Daedalus earlier, in a fit of jealousy hurled his nephew, Perdix from a huge rock. But as the nephew fell, he became a partridge. Daedalus, as he was now guilty of homicide fled to Crete and Minos and Pasiphe gave him refuge. The theme of sacrifice is also common in Indian and Greek literature. Minos had prayed to Poseidon (the earth-shaker) to send him a bull from the sea for sacrifice. The expression, "bull from the sea" brings before our mind the legend of churning of the ocean, whence Indra's white elephant and horse ucchaisrava and other jewels had come out. Poseidon did send the bull to Minos. But Minos was so covetous that he kept the bull for himself and sacrificed another less beautiful bull. When Poseidon came to know of this he caused Pasiphe, wife of Minos to fall in love with the bull sent by him. Pasiphe exploited Daedalus' skill and got a lifelike hollow cow made by him, wherein she hid and mated with the bull. Her offspring was Minotaur who had a man's body but the head of a bull.¹² This motif is also similar to one of Rushyashrunga which I shall deal with later. This legend is again compa-

7. Mb. Adi P. 66.35 :

त्वाष्ट्री तु सार्वभूमीयो कङ्कारुपधारिणी।
असूयत महाभागा सान्तरिक्षेऽश्विनावुभौ॥

8. Classical Mythology, p. 345 ff.

9. Mb. Adi P. 110. 22 f.

गृह्मणापचार सा बन्धुपक्षमयात् तदा।
उत्ससर्ज कुमारे तं जले कुन्ती महाबलम्॥
तमुत्सृष्ट जले गर्भं राधाभर्ता महाशयाः।
पुत्रत्वे कल्पयामास समर्थः सूतनन्दनः

10. Mb. Adi P. 110.10

पुत्रस्ते निर्मितः सुभ्रु शृणु यादृक् उमानते।
आद्रित्ये कुण्डले बिभ्रत् कवचं चैव मामकम्॥
शस्त्रास्त्राणां अमेघं च भाविष्यति आचारस्मिन्ते।

11. Classical Mythology, p. 345.

12. Classical Mythology, p. 395.

rable with that of Gokarna. (Bhagawat P.Mah) Therein the story is that a Brahmin named Atma-deva had no issue. He had tried to please the gods with sacrifices but to no purpose. One day he and his wife Dhunduli were passing through a forest and met a medicant. They told him that they were very unhappy as they had no issue. The medicant gave them a fruit which was to be eaten by the wife whereafter she would conceive. The wife did not believe in the efficacy of the fruit and did not eat it. Instead, she fed it to her cow. The cow eventually gave birth to a being which was human in-form except for ears. The ears were those of a cows. He was, therefore, called as Gokarna. This motif of non-human limbs is found in the story of Midas. King Midas disagreed with the verdict of the judge, mountain Tmolus, in a musical contest between Pan and Apollo. The god of Delos could not bear that such stupid ears as of Midas should remain in their human form. He made them longer, covered them with white shaggy hair, and made them inflexible at their base, so that they could be twitched.¹³

Twashta or Vishwakarma as an architect of Varunashaba in the Mb. and Daedalus as an architect of the labyrinth, stand comparison. It is said the Daedalus got the idea of the Labyrinth from huge and complex palace of Cnossus¹⁴ with its many passageways and endless series of rooms.

In the Mb. Twashta is said to have contrived pushpaka vimana (Vana P. 161.37). Daedalus also contrived feathered wings, held together by wax. With the help of this contrivance Daedalus and his son Icarus could escape from Crete, as Minos would not otherwise let them go. As they flew high above the sea, Icarus ignored his father's warning not to fly too close to the Sun. The wax of his wings melted and Icarus fell into the sea. This legend brings to our mind the story of Jatayu and Sampati, which occurs in both, the Ramayana and the Mb. (Rama. Kishkindha 58) (Mb. Van. p.282-4950) In the Mb. both these birds are said to be sons of Vinatanandana Aruna. Once they soared high and went nearer the Sun and Sampati got his wings burnt while he took Jatayu under his wings to protect him. Sampati fell on the Malaya mountain, crippled.¹⁵ This place is also said to be near the sea. Icarus fell into the sea later known as Mare Icarium. The story of Daedalus and Icarus narrated by Ovid in *Metamorphosis* is very touching.

Father Daedalus tells his son not to fly too low for fear of being soaked in the sea-water and not too high for fear of being burnt by the Sun. While the father worked on his sons wings and gave advice, his hands trembled with father's anxiety. He kissed his son and rose into the air upon his wings. He led the way, as the bird that leads its young ones from the nest into the air. But the boy began to exult in his bold flight. He left his guide, and driven by a desire to reach heavens, took his course too high. The burning heat softened the scented wax and the wings dropped hurling the boy into the sea.¹⁶

The description by Ovid also compares well with the one in Ramayana.¹⁷

The River as a parent

In the Mb. Ganga is said to be the mother of eight vasus, including Devavrata. The motif of river as a parent is obtainable in the Greek mythology where Daphne is supposed to be the daughter of the river Peneus. Apollo loved Daphne but Cupid dealt adversely with her. Cupid darted two arrows, one each at Apollo and Daphne. The one darted at Apollo was sharp, bright and golden. So Apollo fell head over heels in love with Daphne. But the arrow, which Cupid darted at Daphne was blunt, dull and leaden's. So Daphne shunned her lover. Apollo chased Daphne and she ran away and away. At last Daphne came to the river Peneus, which was her father and prayed him to destroy her beauty and allow her always to be a virgin. Her prayer is granted by the river Peneus and she is turned into a laurel.¹⁸ The theme of *Metamorphosis* is traceable in Hindu folklore as well as in the lore of many tribes, where a person can be transformed into a tree or an animal. The legend of Apollo and Daphne was later interpreted as an allegory. Daphne came to be identified with virgin Mary, who was so pure and beautiful that God chose her to conceive his only son by the work of Holy Spirit. Mary is supposed to be virgin, before, at, and after the birth of Christ. The motif of *Metamorphosis* is also seen in another story in connection with Apollo. Apollo loved a Spartan youth, Hyacinthus, who got wounded in the face. Blood oozed from his face and fell on the grass. The drops of blood took the form of lilies, not white, but purple. There is again the story of Narcissus, where he kills himself in his attempt to reach his image in water. The flower Narcissus sprang from his blood.¹⁹

A similar theme is seen in the Mb. where lotuses are said to have sprung, not out of drops of blood, but out of tears.²⁰

13. *Classical Mythology*, p. 165.

14. *Classical Mythology*, p. 395.

15. Mb. Vana P. 282.44 f.

समीपे सहामलयौ दर्दरं च महागिरिम्।
ततो मलयमारुहा वैश्चनते वरुणालयम्॥
अनेकं ब्रह्माविस्तीर्णं योजनानां महोदधिम्।

16. *Classical Mythology*, p. 396.

17. Ramayana, Kishkindha K. 58.3.7

वृक्षभावादपक्षत्वाच्छृण्वन्स्तदपि मर्षये।
न हि मे श्रावितरस्यद्य भ्रातृवैरक्षिमोक्षणे॥
पुरा वृक्षवधे कृते स चोहं च जयैषिषौ।
आदित्यमुपयातोऽसौ ज्वलन्तं राक्षसमालिनम्॥
आवृत्त्या कोशमार्गेण जवेन स्वर्गतौ भूद्वाम्।
मधुं प्राप्ते तु सूर्ये तु जलपुत्रवसीदिति॥
तमहं भ्रातरं दृष्ट्वा सूर्यरात्रिभिरर्दितम्।
पद्माभ्यां धारयामास स्नेहात् परमविह्वलम्॥
निर्दग्धपत्रः पातितो विन्ध्येऽहं वानरर्षिभ्यः॥

18. *Classical Mythology*, p. 156.

19. *Classical Mythology*, p. 213.

20. Mb. Adi P. 196.11

सा तत्र योषा रुदन्ती जलार्भिनी।
गङ्गा देवीं व्यवगाह्य व्यतिष्ठत्॥
तस्याश्रान्निदः पतितो जले यः।
तस्यैव तत्र कण्ठचनम्॥

Jarasandha

In the Mb. Jarasandha is said to have been born in two parts. But the rakshasi Jara joined these two parts together. The king Brihadratha was happy to have the son. This rakshasi was, in fact, a goddess created by Brahma. She was the presiding deity over births. This belief has trickled down through ages and this deity is still believed to be present in the houses and looks after the welfare of children.²¹ In Maharashtra she is called Jeevati. A similar deity is there in the West, known as Natio. She is regarded as the protectress of infants.

Nari Tirthas

These are mentioned in Adi.P. 216-217. These tirthas were long abandoned by hermits as they were often lured away by alligators. Arjuna during his sojourn plunged into the waters of Agastyatirtha which was one of the Naritirth. He was caught by an alligator, but he overcame it and pulled it out. The alligator then assumed the form of a beautiful woman. She was Varga. She along with her friends viz: Saurabheyi Samichi, Budbuda and Lata had been to the Lokapala Kubera. There they laughed at a respectable brahmin, and he cursed them. They became crocodiles and infested the five tirthas. Now that Arjuna pulled them out, the ill effect of the curse ended. The association of water places with apsaras (apsu sarati i.e. moves in water) became a common motif in the folk literature. A parallel is seen in the Greek literature also, where Naridas are described as inferior deities presiding over rivers, springs, fountains and wells. They are often shown in sculpture and paintings as beautiful girls leaning on an urn, from which water flows. The word Naiad also bears a meaningful resemblance with the word nadi in Sanskrit and other Indian languages. This also indicates the linkage of language with the mythology.

Mb. is verily a ocean of legends and myths. Many of these myths have migrated to various lands and have undergone a considerable change in their contents. On this occasion it is not possible to narrate all such migrated legends and myths in detail. I have attempted to show certain parallels in eastern and western literature. I shall touch three more myths from the Mb.

Yavati

Yavati is the second son of Nahusha. Devayani, the daughter of Shukracharya sees Yayati and desires to marry him. She tells her father and the father gives Yayati his daughter. The father however, asks Yayati not to make any advances to Sharmishtha. Devayani's sister Sharmishtha seeks advice from Yayati and when the father comes to know of this, he curses Yayati saying that he will instantly be overcome by old age.²² Yayati asks for pardon and a relief is provided by Shukracharya. Yayati can now transfer the old age to someone else. He asks his sons to

exchange youth with his old age. Yadu, Turvasu, Druhu and Anu refuse to oblige, while Puru accepts the old age. Yayati indulges himself in the life of carnal enjoyment, but is not satisfied.²³

In the Greek mythology a somewhat parallel case is of Tithonus. He was a handsome youth of Trojan royal house. Eos or Aurora, the goddess of dawn loved him. She goes to Zeus and asks immortality for Tithonus. Zeus grants the prayer. Poor Eos asks for immortality but not for perpetual youth. As long as Tithonus was youthful, he took his pleasures. But when the first grey hair sprouted from his head, Eos avoided his bed. But she kept him in her house and tended him, giving him food, ambrosia and lovely garments. The wish for perpetual youth, appears to have been granted as in later traditions. Tithonus is said to be a grass-hopper, who can moult and thus grow young.

Savitri

The legend of Savitri, the daughter of Ashwapati is well known in Mb. (Vana P. 293-297). I need not narrate it here. The main theme in the story is that Savitri follows the soul of Satyavan which was being carried away by Yama. She outwits Yama and secures four boons from him viz: (1) restoration of the eyesight to her father-in-law, (2) restoration of the kingdom (3) sons for her father and (4) restoration of Satyavan to her.

The story of Orpheus bears a little resemblance with this Indian legend. Hymen, the god of marriage though present at the marriage of Orpheus and Eurydice, did not smile or bless the couple. Soon after the marriage while the new bride was wandering through grass, she was bitten by a serpent and succumbed. After lamenting the death of his beloved, Orpheus decides to go to the land of death to win back his lost bride. He sings and plays on his lyre and the monstrous hound and other creatures at the door of death become harmless. He asks the god of death to return his beloved. If he would not return her, Orpheus asks him to take his life also.²⁴ The god of death is pleased with Orpheus's love for the wife, and his daring in approaching death. With great reluc-

21. Mb. Sabha P. 18.2 f.

गृहे गृहे मनुष्याणां नित्यं तिष्ठामि राक्षसी
गृहे देवीति नाम्ना वै पुनः शृणुस्वयं भुवा
यो मा भक्त्या लिखेत् कुड्ये सपुत्रा यो वनान्विताम्
गृहे तस्य भवेद्वृद्धिः अन्यथा क्षयमारुयात् ॥

22. Mb. Adi P. 83.89.

धर्मज्ञः सन् महाराज योऽयमभक्त्याः प्रियम्।
तस्माज्जरा त्वाभविताद् धर्मिण्याति दुर्जया ॥

23. Mb. Adi P. 85.12

न जानु कामः कामानामुपभोगेन ब्राम्हणि।
रावेवा कृष्णवर्त्मव भूय स्वाभिवर्धते ॥

24. Cf. with Savitri's words. Mb. Vana P. 297.53 f.

न कामये भर्तुर्विना कृता सुखं न कामये भर्तुर्विना कृता विभ।
व कामये भर्तुर्विना कृता भिन्नं न भर्तुर्विना व्यवसायी जीवेतुम् ॥

tance the god agrees to give Eurydice back on condition that Orpheus would not look back at Eurydice till her feet touched the earth. Both of them, thereafter, journey throughout the night and at the dawn Orpheus is seized with an irresistible desire to look back at Eurydice. They are yet to touch the earth. As Orpheus looks back, the promise is not kept, and he does not get Eurydice back.

It is true, that the motifs of these two legends are not identical. But the similarity in certain aspects is remarkable and this indicates the similar functioning of the human mind.

It will be seen that the legend of Orpheus ends on a tragic note. Such tragic notes in Greek mythology have subsequently evolved into classical tragedies in the Greek literature.

There is again the story of Aeson. His son Jason was exiled by his uncle. After attaining manhood, Jason asked his uncle for his father's kingdom. The uncle asked Jason to go in quest of the Golden Fleece. (Cf. the idea of Kanchan Mruga in *Ramayana*). On his return Jason found his father an infirm, and at his request Medea used her magic to rejuvenate Aeson by cutting him up and boiling him in a cauldron, along with certain herbs. (Cf. here the herbs viz: mrutasanjivani, vishalyakarani, suwarnakarani and sandhani mentioned in the *Ramayana*.²⁵ which Hanuman brought from Dronachalam. (Dronagiri mountain). In another version Medea draws the blood from Aeson's veins and refills them with juices of these herbs. (Modern technic of transfusion). This restores to Aeson the vigour of youth. The similarity of the son trying for the rejuvenation of his father is striking and brings to our mind the story of Yayati and Puru.

Rushyashrunga

The story of Rushyashrunga in the Mb. (Vana P. 110) is also interesting in the present context. Rushyashrunga was the son of Vibhandaka. He had a mysterious birth. Vibhandaka once came to a lake in the course of his wanderings, where he saw Urvashi. The sage ejaculated in water and a female deer was impregnated when it drank it.²⁶ Brahma had said that the devakanya who was in the form of a mrugi would be released from the curse after giving birth to a great sage. The story goes that Rushyashrunga as he resided alone with his father in the forest had not seen a woman till he came of age. The king Lomapada has a drought in his kingdom and the sages said that he should offer his daughter in marriage to a sage of a high order. The king is helped by a harlot who succeeds in seducing Rushyashrunga. She brings him to the capital where the king gives him his daughter's hand in marriage. It rains thereafter and the drought ends.

A close parallel with Rushyashrunga's story is that of Pan in the Greek mythology. Pan is

not completely human in form but partly by a man and partly by a goat. He has horns and ears and legs of a goat and the body of a man. He is full of spirit, impulsive and amorous. His mother is said to be a nymph. The significant fact is that Pan had no horns like Rushyashrunga. The story of Rushyashrunga finds place in Jataka Kathas and it migrated through that medium over a wide part of the world. Dr. Dieter Schlingloff²⁷ has studied the image of unicorn of the middle ages and has traced the literary evidences leading to the formation of this image.

Unicorn is an animal conceived from the world of unreality. Its picture is familiar to us from the books of fairy tales, and more so from the trade mark of M/s. Burroughs Wellcome, a pharmaceutical company. It is a half horse and half donkey with a pointed horn in the middle of its forehead. The creature is supposed to be proud, chaste, solitary, freedom loving and daring and untamable. Are not some of these characteristics traceable in Rushyashrunga? Ktesis, a court doctor of King Artasaerxes II (400 B. C.) wrote about wild asses in India which were as big as horses. They had a horn of one and a half feet length on their foreheads. The powder of this horn was supposed to be a remedy for poison effects. A cup made out of this horn would protect its owner from cramps and epilepsy, possibly due to vitamia contents in the horn. Schlingloff writes that poets have glorified the taming of the unicorn by the virgin as a symbol of love. This motif is directly traceable to Rushyashrunga. Physiologus's report on the unicorn, dating in early Christian era, describes the ways and means to catch the unicorn. A pure virgin is taken to him. She captures him and he follows her to the king's palace. German Scholars, F.W.K. Muller and E.H. Luders have traced the origin of Physiologus's story of unicorn to Buddhist narratives and other sources from India. The following references are cited by Schlingloff (1) *Jataka* (2) *Mahavastu* (3) *Buddhacarita* (4) *Valmiki Ramayana* (5) *Mb.*

25. *Ramayana*, Yuddha K. 74.32 f.

दक्षस्योषधयो दीप्ता दीपयन्तीर्दिशो दक्षः।
मृतसंजीवनीं चैव विद्वान्प्रकरणं मापि।।
सुवर्णकरणीं चैव संधानीं च महोषधीम्।

26. Mb. Vana P. 35 ff.

तस्य रेतः प्रचस्कन्द दृष्ट्वाप्सरसमूर्वङ्गीम्।
अप्सरस्पृक्षतो राजन् मृगी तद्यापिबत् तदा।।
सहोयेन तृषिता गर्भिणी चामवत् ततः।
सा पुरोक्ता भगवता ब्रह्मणा लोककर्तृणा।।
देवकन्या मृगी भूत्वा मुनिं स्रूय विमोक्षयसे।।
तस्यां मृग्यां समभवत् तस्य पुत्रो महान् ऋषिः।
ऋष्यद्रुहास्तपोनित्यो वन एवाभ्यवर्तत।
तस्यैव श्रुत्वा शिरसि राजन् आसीन्महान्मनः।।

27. German Scholars in India, Vol. I.p. 295

The Indo-German Intellectual Relationship; German Scholars on Sanskrit Studies

By Dr. A. C. Sarangi

PREAMBLE

The Indo-German relationship, be it economical or political, is primarily based on the intellectual relationship between these two peoples. Even a cursory glance at the various writings of German scholars on Indology inspires one with a sense of reverence due to the dedication and ceaseless effort in revealing the spirit of India. It is hardly an exaggeration to say that they are the discoverers of the real treasure that Ancient India possessed, and the best interpreters of our literature as well as our culture. What has been said of Max Muller is equally true of all Germans, viz. they are the true friends of Modern India.

Although it is no mean task to make a comprehensive assessment of the contribution of German scholars to Sanskrit studies, an attempt is made in this small essay to highlight the same in certain aspects of Indology.

INTRODUCTION

"If I were asked what I consider the most important discovery which has been made during the nineteenth century with respect to the ancient history of mankind, I should say it was the simple etymological equation: Sanskrit Dyaus-Pitar = Greek Zeus Pater = Latin Jupiter = Old Norse Tyr." In 1891 these epoch-making words of Max Muller uttered in his Gifford lectures on Anthropological religion served to revolutionise the thoughts of the then scholars of the world, and the science of language took its real shape. Thus, now the three fourth population of the whole world claim to be the descendants of the same cultural race, i.e. Indo-European which embraces these two sisterly languages, Sanskrit and German. Hence, it is natural that both the peoples are attracted to each other being tied with blood relationship.

The German scholars have always been inquisitive towards Indian cultural heritage which has influenced the world culture to a great extent. And naturally they have been attracted by the Sanskrit language without the help of which the Indian hoary past can never be penetrated. The study of Sanskrit language and the study of Hindu religion go hand in hand to make a positive contribution towards a complete reassessment of Indian culture.

1. GERMAN SANSKRITISTS OCCUPYING SPECIAL CHAIRS IN INDOLOGY

1.1 On the first page of the history of Indo-German Intellectual Relationship we see the immortal name of Friedrich Schlegel, the first German to have received the knowledge of Sanskrit from an English naval officer, Alexander Hamilton. In 1802 Hamilton was the only man in the whole of European continent who knew Sanskrit. This

meeting between the teacher and the pupil was accidental. Hamilton was arrested in Paris on his return from India because of Napoleon's continental restrictions. Schlegel took the opportunity and learnt with him three hours daily and after six years i.e. in 1808 got published his book, Über die sprache und weisheit der Inder. Ein Beitrag zur Begründung der Altertumskunde. (On the language and wisdom of the Indians. A contribution to the study of antiquity.). This first German indological publication inspired many others to follow in his footsteps. His own brother, August Wilhelm Schlegel, made a comprehensive study of the language, and as a reward he was invited to adorn the first chair of Indology on the German soil, i.e. in Bonn, and held the chair till his death in 1845. He was followed by other German Professors at Bonn like Christian Lassen, Theodor Aufrecht, Hermann Jacobi, Willibald Kirfel and Paul Hacker. They have their positive contributions to Sanskrit studies. Herman Jacobi (1850-1937) is famous for his studies on Rāmāyana and its historical significance. His work Das Rāmāyana, Geschichte und Inhalt (The Ramayana: Its history and contents) is the real proof for this. Kirfel and Hacker are two important names intimately connected with original research in Puranic studies. Das Puraṇa Pañcalakṣaṇa (1927) has been a basic work for scientific investigation in Purāṇic studies. The very methodology adopted there makes one wonder-struck regarding his keen observation on textual criticism. Besides for Indian Philosophy Hacker is well-known for his legendary and mythological studies like the Man-lion myth etc.

1.2 Tübingen University was the second in line in installing the chair for Indology. Rudolf Roth was the first occupant of the chair and those who followed are Richard Garbe, (who has translated some Philosophical chapters of the Mahabharata), Jacob Wilhelm Hauer, Paul Thieme and the present Dean of the University as well as the Professor in Seminar für indologie who is H.V. Stietencron. Recently Paul Thieme got D.Litt from the Banaras Hindu University honoris causa for his outstanding works in Vedic and Grammatical studies. His Ph.D. Thesis, Panini and the Veda (1935) and numerous substantial articles on Panini's grammar have proved the way for further researches in Indology. The present occupant of the chair, H.V. Stietencron has been working in the field of Comparative Religion, mythology and other aspects of Indology based on Sanskrit texts. Among his prominent writings are the Indische Sonnenpriester, Sāmba und die Sākadvīpiya Brāhmaṇa (Indian Sun-priests, Samba and the Sākadvīpiya Brāhmaṇa) (1966), the Gaṅgā-Yamunā, and many articles on Lord Jagannatha and other aspects of Indian culture.

1.3 The third chair was instituted in 1862 in Göttingen and the occupants of the chair have been worthy scholars like Theodor Benfey, Franz Kielhorn, Herman Oldenberg, Emil Sieg and Wald-schmidt. Benfey (1809-1881) is known for his edition and translation of the Sāmaveda which was printed

got published. The works of Hermann Oldenberg include Die Weldanschauung der Brāhmaṇa Texte and those on the Grhya Sūtras (Manuals on domestic rites) published in the Sacred Books of the East Series. Oldenberg's work on the Upanisads, Die Lehre der Upanishaden und die Anfänge des Buddhismus (The Doctrine of the Upanishads and the Beginnings of Buddhism) (1915) deserves special mention. Franz Kielhorn (1804-1908) who was a Professor of Sanskrit at Deccan College in Pune was an authority on Pāṇini's grammar. His critical edition of Patañjali's Vyākaraṇa Mahābhāṣya is still considered to be the only authentic text for investigations on grammatical studies. Many of his famous writings as Notes on the Mahābhāṣya were contributed to the Indian Antiquary and are still treated as model-studies for modern Pāṇinians. In 1876 appeared his well-known work Kātyāyana and Patañjali: And their relation to each other and to Pāṇini which for the first time distinguished, or rather disentangled, with scientific exactitude, Kātyāyana's contribution from the text of Patañjali's Mahābhāṣya.

1.4 Another chair of Indology was founded in 1861 and its holders were Martin Haug, Ernst Kühn, Wilhelm Geiger, Hanns Oertel, Wuest and Helmut Hoffmann. Haug served for some years in India as a Professor of Sanskrit. Hoffmann was however interested in Buddhism and Lamaism.

1.5 In 1869 a chair of Indology was founded in Marburg University and the Professors there contributed profusely to Sanskrit studies. The famous occupants were Friedrich Wilhelm, Jacob Justi, Karl Friedrich Geldner, Hanns Oertel, Jacob Wilhelm Hauer and Johannes Nobel, Wilhelm Rau being the present incumbent. The famous German translation of the Rgveda by Geldner appeared in 1876 and even after a hundred years, the Sanskrit scholars look into this as the basic one, for further Vedic Studies. Wilhelm Rau is known for his work, Statt und Gesellschaft im alten Indien (State and Society in Ancient India) which is based on the Brāhmaṇas.

1.6 In Hamburg a chair for Indology was instituted but its occupants like Sten Konow and Alsdorf developed specialisation in the branch of Jainism. Another occupant of the chair, Heinrich Luders (1869-1943) contributed to Vedism with a fresh and original outlook. It is unfortunate that he died in 1943 and his major work on the Vedic deity Varuna remained incomplete.

1.7 In Heidelberg too German Indologists have been working untiringly and enriching Sanskrit studies. Orissan culture and its contemporary religion has been a branch which has largely attracted its scholars. Purāṇic and Tāntric studies have also been taken up there. The South Asia Institute in Heidelberg was founded in 1962 and scholars like Stietencron (now in Tübingen), Hermann Kulke, Late Fraulein Annacharlott Eshmann and G.C. Tripathy have contributed to the publications of this Institute. Jointly they have brought out The Cult of Jagannatha and the Regional Tradition of Orissa (New Delhi, 1978).

2. MAX MÜLLER AND HIS CONTRIBUTION TO SANSKRIT STUDIES

The story of Indo-German Intellectual Relationship is incomplete without the mention of Max Müller.

whose era has been treated as the starting point of modern Indology. He is Friedrich Max Müller, a very ardent supporter of the ancient Indian culture and a leading western sailor in the eastern sea. India was a paradise on earth for him. Lest he would be disillusioned he did not visit India even for once, but he could imagine her pristine beauty sitting in his Oxford home. In India What Can It teach Us (1883) Max Müller said: "If I were to search the world to find out the country most richly endowed with all the wealth, power and beauty that nature can bestow in some parts, a very paradise on earth, I should point to India. If I were asked, under what sky the human mind has most fully developed some of its choicest gifts, has most deeply pondered on the greatest problems and has found solutions of some of them which will deserve the attention even of those who have studied Plato and Kant, --- I should point to India. And if I were to ask myself, from what literature we here in Europe --- we who have been nurtured almost exclusively on the thoughts of the Greeks and the Romans and of one Semitic race, the Jewish --- may draw that corrective which is most wanted in order to make our inner life more perfect, more comprehensive, more universal, in fact more truly human, a life not for this only, but a transfigured, and eternal life, again I should point to India."

Max Müller, the best known German Indologist in India published six mighty volumes of the Rgveda with the Commentary of Sāyana which came out between 1849-1874. His Sacred Books of the East published during 1874-1884 of which 31 volumes are translations of Indian texts won him worldwide recognition. Apart from this he laid the foundation of researches in the science of Religion and science of language. Although he was criticised for his liberal attitude towards religion, he inspired later scholars for unbiased criticism in the treatment of religion and mythology. His Lectures on Science of Religion and six systems of Indian Philosophy claim authority in the fields.

3. GERMAN SCHOLARS ON VEDIC STUDIES

Research by German scholars in the Vedas started with Friedrich Rosen who translated one eighth of the Rgveda but it was made popular and inspiring by Max Müller and Rudolf von Roth. In 1846, three years before the first volume of Max Müller's edition appeared in the press, Roth had published the Vedic work in German, zur Literatur und Geschichte des Weda (On the literature and History of the Veda). Other important studies on the Veda are Geldner's three complete translations of the Rgveda into German, Grassmann's Wörterbuch des Rgveda, Benfey's translation of the Sāmaveda, Albrecht Weber's translation of the White Yajurveda and Schroeder's editions of the Kāthaka and Maitrayaniya Samhitās. In 1879, Heinrich Zimmer got published his classic work, Altindisches Leben die Kultur der Vedischen Arier ("Ancient Indian life -- the culture of the Vedic Aryans"). Here Hermann Oldenberg's Die Religion des Weda is worth noting. In 1894 in Stuttgart this work appeared which proved an important contribution to the history of religion. Alfred Hillebrandt in Breslau wrote his work, Vedische Mythologie, in 1902 and it was treated as an encyclopaedia on the Indian deities. Then followed famous works on Vedism and Brāhmanismus in

Tubingen in 1908 and Die Weisheit der Veden from Munich in 1925. Hermann Lommel in 1935 published his Die alten Arier -- von art und Adel ihrer Gotter (The Ancient Aryans -- The Nature and Nobility of their Deities). In 1938 appeared a German work, Der Vedische Mensch -- Studien zur Selbstauffassung der Inders in Rg und Atharva (The Vedic Individual -- A Study of the selfcontemplation of the Indian in the Rg and Atharva Veda), written from an Indian point of view by the doyen of Indologists, the present President of International Association of Sanskrit Studies, R.N.Dandekar. The other notable work in this line mentioned earlier is Statt und Gesellschaft im alten Indien -- nach den Brahmana Texten by Wilhelm Rau published in 1957.

There are many German translations of portions from the Atharva Veda like Hundert Lieder der Atharva Veda (A Hundred Songs of the Atharva Veda) by Julius Grill, published in 1857 in Tübingen, Der Hymnus an die Erde (Hymn to the Earth) of Herman Beckh published in 1934 etc. Even today the glorious tradition of Vedic Research continues through Paul Thieme (Tübingen) P Aithal (Heidelberg), Wilhelm Rau (Marburg), Söhnen (Mainz) etc.

4. GERMAN SCHOLARS ON INDIAN PHILOSOPHY

Many German scholars have contributed to the Upanishadic teachings. They are Otto Böhtlingk, Alfred Hillebrandt, Johannes Hertel and Eduard Roer etc. Paul Deussen (1845-1919) is by far the greatest German philosopher contributing to Indian thought. His monumental works include Die Philosophie der Upanishads (1899), Sechzig Upanishaden (Sixty Upanishads) published from Leipzig in 1897 and Die Geheimlehre des Veda (The Secret Teachings of the Veda) published from Leipzig in 1907. Other notable works on the Upanishads are Oldenberg's Die Lehre der Upanishaden und die Anfänge des Buddhismus (The Doctrine of the Upanishads and the Beginnings of Buddhism) published in 1915 and Die Entwicklung der Gottesidee bei den Indern of Hermann Jacobi published in 1923.

The Bhagavad-Gītā, the kernel of the Hindu philosophy, was first translated into Latin by A.W.von Schlegel in 1823. Later it was translated by Garbe, Deussen and Schroeder etc. Sāṅkara's Vedantic philosophy influenced Deussen and in 1823 he wrote his work, Das System-des Vedant. No less is the contribution of German scholars to other systems of Indian Philosophy. Richard Garbe in 1894 wrote an exposition of the Sāṅkhya System, Die Sāṅkhya-Philosophie eine Darstellung des indischen Rationalismus. J.W. Hauer, H. Walter and Richard Schmidt enriched the Yoga Philosophy and to all these scholars Deussen provided with a German translation of the original philosophical texts. Similarly other systems like those of Rāmaṇuja and Madhva were studied with thoroughness by Helmuth von Glasenapp and Rudolf Otto. It is also necessary to recall the great names of the present day, like Frauwallner from Vienna, Wezler from Hamburg, Rau from Marburg, etc.

5. GERMAN SCHOLARS ON SANSKRIT GRAMMAR

Language and Religion have always been dear to the German scholars. Otto Böhtlingk completed his translation of the Aṣṭādhyāyī in 1887 and that has been guiding Paninians ever since. S.C. Vasu in India, while translating Pāṇini's Aṣṭādhyāyī was benefited much by this monumental work. Theodor Goldstucker studied Pāṇini and many related problems and as an outcome, gave his famous book, Pāṇini and his place in Sanskrit literature (1860). Famous German Grammarians like F. Kielhorn (1840-1908) and Paul Thieme have enriched this science to a great extent. Robert Birwe from Köln is now busy studying Pāṇini and his Ganapatha and has doubted the very authenticity of some of Pāṇini's rules. He goes to prove that some Sūtras are interpolated in the text. Hence a critical edition of Pāṇini's Aṣṭādhyāyī is a crying need of the hour. Liebich (1862-1939) has critically edited the Dhātupāṭha with proper accent marks. The basic work for Sanskrit linguistics is the Altindische Grammatik (1896) of Wackernagel and Debrunner.

6. GERMAN SCHOLARS ON DIFFERENT SCIENTIFIC MANUALS

From amongst many German Indologists devoting their valuable time in this field mention may be made of a few leading scholars who tried to interpret scientifically the basic tenets of Śāstras. George Buhler translated the Manu-smṛti, Āpastamba and Gautama Dharmasūtras in the Sacred Books of the East series. Among the famous works of Julius Jolly (1849-1932) those like the Outlines of a History of Partition, Inheritance and Adoption, Recht und sitte (Law and customs), translations of the Narada Smṛti and the Bṛhaspati Smṛti will be remembered long. Meyer's German rendering of the Arthashastra (Das altindische Buch vom Welt-und Staatsleben) (1926), Bernhard Breloer's Kautilya Studien, and similar works of Friedrich Wilhelm, Scharfe, Schlingloff and Hans Losch are deservedly famous. The Kāmasāstra was studied by R. Schmidt and J.J. Meyer. The Hindu Medicine was a field of interest for Jolly (1901) and Zimmer Jun (1941).

7. GERMAN SCHOLARS ON EPICS AND PURĀṆAS

7.1 Some episodes from the Great Epic of India (the Mahābhārata) have always attracted the German scholars and so Franz Bopp and Holtzmann have written their works on these. The story of Nala and Damayanti was variously translated by Bopp, Kosegarten and Friedrich Ruckert. Similarly the story of Sāvitrī and Satyavān was rendered in German by A.F.von Schack which later appeared in the book Stimmen Vom Ganges (Voices from the Ganges) published in Berlin in 1857. The most striking work in this field is Das Māhābhārata Seine Entstehung, Sein Inhalt, Seine Form (The Mahābhārata -- Its origin, content and Form) published in Göttingen in 1922 by Hermann Oldenberg. A similar well-known work is by Hermann Jacobi, Mahābhārata -- Inhaltsangabe, Index, Concordanz, published in Bonn in 1903.

7.2 The Rāmāyana attracted the German intellectuals and a pioneering work in this field is Das Rāmāyana Geschichte und Inhalt of Herman Jacobi published in 1893. A Baumgartner's work Das Ramayana und die Rama - Literature der Inder published in Freiburg in 1894 is also worth mentioning.

7.3 Scholars interested in Purāṇic studies are Kierfel and Hacker about whom much has been said earlier. Other famous works like Der Indische Mythos (The Indian myth) of Zimmer which was published in Zurich in 1936 and reprinted in 1952, von Schack's Stimmen vom Ganges (voices from the Ganges), A. Paul's work Krischnas Weltengang-ein indischer Mythos in Zwanzig Andachten (Krishna's passage through the world -- An Indian myth in twenty Devotions) published in Munich in 1905 and Alois Wurm's Ph.D. Thesis, "The Character portrayals in the Rāmāyaṇa of Vālmiki" (1976) are worth mentioning.

8. GERMAN SCHOLARS ON CLASSICAL SANSKRIT LITERATURE

German contribution to this field of research is nonetheless insignificant. Poetics was studied by Indologists like Otto Böhtlingk, Hermann Jacobi and Richard Schmidt. Even in the present day scholars like Hahn from Bonn, Braun from Göttingen, Murti from Köln and Buddruss from Mainz are actively engaged in research on ornate poetry. In the field of Indian Fables and fairy-tales the Grimm brothers, Theodor Benfey (Translation of Pancatantra), Hermann Brockhaus (Kathāsarit-sāgara) Richard Schmidt (Sukasaptati) etc are well-known.

9. GERMAN SCHOLARS ON LEXICOGRAPHY

In the field of Lexicography the Petersburg Wörterbuch can be called the greatest achievement of German scholarship. Otto von Böhtlingk and Rudolof Roth are the two compilers of this dictionary. This work in seven volumes was published between 1852 and 1875 and is used even today as the most authentic lexicographical tool in research.

10. PRESENT ACTIVITIES ON SANSKRIT STUDIES

10.1. IN AUSTRIA

The German speaking people of Austria, Federal Republic of Germany and German Democratic Republic and Switzerland have still continued their interest on Sanskrit studies. In the Indological Institute of Vienna (Austria) Prof. Oberhammer published the History of Viśiṣṭādvaita School and is now working on a Dictionary of Indian Epistemology and logic. The volume of E. Frauwallner's Kleine Schriften is being prepared by Prof. Steinkellner. In the Vienna Institute of Indology Tilmann Vetter got published his work, Studien Zur Lehre und Entwicklung Sankaras in 1979. So also in Oesterreichische Akademie der Wissenschaften recently some works of Oberhammer and Kellner have been published. The very recent work appeared from this Institute is Hertha Krick's Das Ritual der Feuergrund - und - Darstellung und Interpretation; Heft 16 published in 1981.

10.2 IN FEDERAL REPUBLIC OF GERMANY AND WEST BERLIN

Although during the 2nd world war many Indological Institutes were destroyed, many new centres were founded after the war and apart from the traditional branches of German Indology being continued, many new ones are introduced. Sanskrit is being

studied in 20 Universities of West Germany. They are: West Berlin, Bochum, Bonn, Erlangen, Frankfurt, Freiburg, Giessen, Göttingen, Hamburg, Heidelberg, Kiel, Köln, Mainz, Marburg, München, Münster, Regensburg, Saarbrücken, Tübingen and Würzburg out of which Veda and Brāhmaṇa are being studied prominently in Erlangen and Tübingen, and Philosophy at Hamburg and Münster etc. Research Journals containing articles on Sanskrit are being published regularly. These are:

1. Munchener Studien Zur Sprachwissenschaft
2. Studien Zur Indologie und Iranistik
3. Zeitschrift der Deutschen Morgenlandischen Gesellschaft
4. Zeitschrift für Missionswissenschaft und Religionswissenschaft
5. Zeitschrift für Vergleichende Sprachforschung

Sanskrit works are being published serially in Alt-und Neu-Indische Studien (Indological Institute, Hamburg), Beiträge Zur Sudasienforschung (South Asia Institute, Heidelberg), Freiburger Beiträge Zur Indologie (Indological Institute, Freiburg) etc.

From amongst a large number of recent publications mention may be made of a few:

P.K. Aithal, The Āśvalāyana- Grhyasūtra,

Cried. Adyar, Madras 1980.

G. Bandini, Die Erörterung der Wirksamkeit:

Bhartrhari's Kriyā-samuddeśa und

Helarāja's Prakāśa ... aus dem Sanskrit

Übersetzt. Wiesbaden, 1980

S.N. Murti Kālidāsa's Kumārasambhava with the commentary of Vallabhadeva

Wiesbaden, 1979.

R. Tsuchida, Das Sattra-Kapitel des Jaiminiya

Brāhmaṇa, Marburg, 1979.

E. Hofstetter Der Herr der Tiere im alten Indian.

Wiesbaden, 1980.

Apart from these books and monographs, there are a large number of articles contributed by German scholars to research Journals all over the world. During March 24-29, 1980, the 21st German Oriental Conference was held in West Berlin.

10.3 In GERMAN DEMOCRATIC REPUBLIC

In 1979 (May 23-30) the Humboldt University of East Berlin organised the Fourth World Sanskrit Conference of International Association of Sanskrit

Studies at Weimar. In January 1980 a scientific colloquy was organised by the Academy of Sciences of G.D.R. on the occasion of the 80th birthday of Walter Ruben, Professor Emeritus, at Humboldt University. The papers read there have been published in the *Sitzungsberichte der Akademie der Wissenschaften der DDR*, 1980. Among its contributors were W. Morgenroth, Mylius, Ritschl and M. Schetelich.

Sanskrit studies are being carried on seriously in places like:

1. Humboldt University of Berlin.
2. Academy of Sciences of G.D.R.
3. Karl Marx University of Leipzig.
4. Martin Luther University of Halle
5. Frierich Schiller University of Jena.
6. Wilhelm Pieck University, Rostock.

In Berlin, Walter Ruben continued his Sanskrit studies and his works like Wissen gegen glauben und Die Entwicklung des historischen Denkens bei den Indern und Griechen (The Development of historical thinking with the Indians and Greeks), shows his interest in Cultural history of India. Wolfgang Morgenroth continues his studies on the history of Indian languages with special reference to some articles on Sanskrit and MIA dialects.

In Leipzig, Klaus, Mylius completed his work, Geschichte der Literatur im alten Indien (History of Literature in Ancient India). He translated the Bhagavat-Gītā into German and has contributed papers mainly on the history of religion in India. In Halle, Herbert is continuing his studies in the history of Indian art and epigraphy.

AM ENDE (The End)

As has been seen above, the German Indologists of the past and the present days always possess a secret longing for the Sanskrit language and Indian culture. To quench their thirst for knowledge, either they go to India or read about India and her literature. The outcome of their studies has made the German nation great and also benefited the world. In the language of a German Indologist, Meyer Benfey, Germany and India are two idealists among the nations; since both of them are nations of thinkers and poets. Both the peoples have shown their deeper interest in the thirst for knowledge and not the thirst for power and ruthless egoism.

As a result, the earth and heaven will combine and the earth will turn into paradise. Here the most celebrated poet of Germany Goethe comes to our mind whose eulogy of Kālidāsa's Sākuntala may be taken as a symbol of the apex of the German response to Indian literature. He went lyrical as if in a trance when he uttered the following verse:

"Would thou the young year's blossom

and the fruits of its decline,

and all by which the soul is charmed

enraptured, feasted, fed?

"Wouldst thou the earth and the heaven

itself in one name combine?

I name thee O Shankuntalā

and all, at once, is said."

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Sanskrit Inscriptions in South East Asia

By Dr. R. V. Ramdas.

The impact of Indian civilization over South East Asia is studied by a number of renowned Dutch, French and Indian scholars. The Sanskrit inscriptions and the Chinese accounts constitute the main sources of our information. In this paper an attempt has been made to have the glimpses of Hindu culture as revealed by Sanskrit inscriptions in South East Asia.

The oldest inscriptions hitherto known have been found in the island of Borneo (now called Kalimantan) Four Yupas (sacrificial posts) originating from a place in Kutei on the Mahakam river inform us about the famous King Kunduga and his son Asvavarman, who like Ansuman, founded a family. Asvavarman had three sons, the most excellent of whom was His Majesty Mulavarman, lord of the Kings who performed a bahuvarnaka sacrifice (which costs much gold) occasion of that event the brahmanas erected one of the Yupas.

श्रीमत्: श्रीनिरेन्द्रस्य कुडंगस्य महात्मनः
पुत्रोऽश्ववर्मा विख्यातः वंशकर्ता यथाज्ञानम्॥
तस्य पुत्रा महात्मनः त्रयस्यहवाग्नयः
तेषां त्रयाणां प्रवरः तपोबलदमान्वितः॥
श्रीमूलवर्मा रीजेन्द्रः यथा बहुसुवर्णिकम् ॥
तस्य यज्ञस्य यूपाय द्विगैर्द्वैस्संप्रकल्पितः॥

King Mulavarman who is exuberantly praised in these stanzas reigned in a Hinduized state situated on the trade route between India and China. The inscriptions may have been erected about 400 A.D.

The oldest inscriptions in the Malayan Peninsula belong to the same period. Two of them are Buddhist: an inscription engraved on a pillar bears the name of the great sea-man Buddhagupta, a resident of Raktamrttika, Mahanavika - Buddhaguptasya Raktamrttikavasa..... Five Sanskrit inscriptions carved on large rocks or stones, four on the Sadone river and one on Tugu (east of Djakarta) and most probably belong to the 5th century A.D. [3] These constitute the oldest traces of Indian script and language in the island of Java. One of them has been engraved under the representation of a pair of feet and informs us that these feet belong to Maharaja Purnavarman who was peerless and illustrious and formerly reigned in Taruma, a name probably surviving in the river name Tarum. [4]

श्रीमान्धाता कृतज्ञो नरपतिसमो यः पुरा तारुमात्याम्
नाम्ना श्रीपूर्णवर्मा प्रचुररिपुद्वाराभेद्य विख्यातवर्मा
तस्येदं पादनिम्बद्वयमाभिगरोत्सादने नित्यदक्षम्
भक्तानां याति धर्तौ भवती सुखकरं ज्ञात्यमृतं रिपुनाम् ॥

Another inscription written under a pair of feet and mentioning the same King is, as appears from the form of letters, somewhat older.

विक्रान्तस्यवनिपतेः श्रीमितःपूर्णवर्मणः।
तारुमनगरेन्द्रस्य विष्णारिवपदद्वयम् ॥”⁵

In the Tugu inscription dating from the twenty second year after King Purnavarman's accession to the throne, two rivers or water courses are mentioned bearing well known Indian names: Chandrabhaga चन्द्रभागा and Gomati गोमती [6]

The three Sanskrit inscriptions of Funan reveal the impact of Hindu culture during the period. The first begins with an invocation to God Vishnu. The second records a donation by Prince Gunavarman to the image of God Vishnu called Chakrateerthswami which was consecrated by the Brahmanas versed in the Vedas, Upavedas and Vedangas and sages versed in the Srutis. The third records a donation to some Buddhist establishment and refers to Buddha, Dharma and Sangha. The Bhagavatas are mentioned in the second and the Aryasanghikas in the third. The second inscription says..

"Tad-bhaktō dhivased vised api ca va
tust antarātma jana
Mukto duskrta-karmanas sa paraman-gcchet
padam vaishnavam" [7]

(A devotee of Vishnu, who lives in or even once enters into this place consecrated to the God Chakrateerthaswami, with a contented heart, will be freed from the effect of his evil deeds and go to the abode of Vishnu).

The third inscription refers to two Kings of Funan named Jayavarman and his son Rudravarman.

"Ekasthan akhilan nardhipagunan udyacchate veksitum
Dhatra nirmita eka eva sa bhuvi Sri Rudravarman
Sarvam Saccaritam krtam nrpatina tenati-dharmarthina
Lokanugraha-sadhanam prati na ca ksatratratum khonditam" [8]

(God created Rudravarman in this world in order to collect in one place all the royal virtues. For the sake of Dharma he, the King, performed all virtuous acts. But he did not forsake the duty of a Kshatriya which contributes to the welfare of men.)

Shiva occupies a position of pre-eminence in the life and culture of Cambodia. The Chinese annals tell us of the prevalence of the cult of Mahesvara in the country in 5th century A.D. We can, however, presume that this cult by then, must have become quite popular so as to attract the attention of the Chinese observers. The first inscripational evidence of the prevalence of Saiva doctrine is provided by Phnom Bayang inscription dated 624 A.D. The inscription is as follows :

"Yam, antaram jyotir upasate budha
niruttaram brahma puran jigisavah
tapasscrute jyavidhaya yadarpana
bhavanty anirdesyaphalanu bandhinah
na kevalam tatphalayagosanginam"

asanginam karmaphalatyajam api
nisargasiddhair animadhibhir gunair
upetam angikrtasaktivistaraiah
dhiyam atitam vachasam agocharam
anespadam yasya padam vidur budah"
[9]

यम् अंतरम् ज्योतिः उपासते बुध
निरुत्तरम् ब्रह्म पुराण जि (गि) स (व)
तपस्कृते ज्यविधया यदपणा
मव (नि) अनिर्देश्य फ (ला) वस्थिना
न केवलम् तत्फलं यत्र त्रै (श) उगिनम्

असंगिनम् कर्मफलसज्जम् अपि
निसर्गसिद्धैः अ (नि) मधिभिः गुणैः
उपेतम् अंगिकृत (स) क्ति विस्तारैः
धियम् अतितम् वाचसम् अगोचरम्
अनेस्पदम् यस्य पदम् विदुः बुधः

Whom (Siva) the sages, desirous of conquering
the Supreme (condition), the absolute Brahman,
worship as eternal light.

Through whom the practice of austerity, study
and sacrifice, provided they are offered to Him,
bring about undefinable results not only for those
who are (still) attached to the acquisition of the
fruits of those works but also for those who are
completely detached and have renounced all fruits
of action.

Whose foot without stand, endowed with tenuity
and other qualities which are inherent in him
and which develop through the action of the ener-
gies. He assumes, foot that surpasses the power
of all thoughts and all words, is known only to
the sages. [10]

It can be distinctly noted that Siva is perceived
here as a personal God but the tone of the inscrip-
tion is distinctly Vedantic. He is also identified
with the absolute Brahman. Moreover, herein
the idea of Yoga is also discernible. Siva is the
'internal light' meditated upon by sages and this
internal light is the Universal Self. The perception
of this immanent principle leads to the trans-
cendent principle, the Parabrahman or Paramatman".

Han Chey inscription commemorates the consecrat-
ion of a Sivalinga under the name Bhadresvara
at Urapura by a loyal and a highly favoured
servant of two Kings Bhavavarma and his son. In
this record Bhavavarman is described as King
of Kings, who was impregnable in his strength
and like unto Mount Meru.

"Raja sri-bhavavarmmeti patirasin mahiphr-
tam
aprudhsya-mahasattvah Tungu meruri-
vaparah" [12]

राजा श्री भाववर्ममेति पतिरासिन महीपहृतम्
अ (पृ) थु स्थ - महासत्त्वाः तुंगु मरुरिवापराः

He is said to have overthrown the mountain kings
(Jivta parvatabhupalam V [10] a clear reference
to the rulers of Funan.

Chitrasena took the name of Mahendravarman
at his consecration and after having conquered
the entire country set up a linga of Girisa (Siva)
on the mountain as the symbol of his victory.

"Jitvemanam-desam akhilan girisasyeha
bhubhruti
lingamannivesayamaso Jayachinhamivatmanh"
[13]

जित्वेमानम् देशम् अखिलम् गिरिशये स्मृति
लिङ्गमन्निवे (शय) मसो जयचिन्तामिवामनः

These events the liberation of Kambhuja and the
erection of the linga must have taken place a
little before A.D. 616.

The Cho-Dinh inscription is a very short record.
It is one of the earliest inscriptions available
and refers to prevailing religious beliefs and practices.

१) नमो देवाय भद्रेश्वरस्वामिपादप्रसादान् अभये त्वा जुह्यं
करिष्यामि (२) धर्ममहाराज - श्रीभद्रवर्मणो यावद्विदि-
त्यौ तावत् पुत्रपोत्रं मोक्षति (३) पृथिविप्रसादान्
कर्मसिद्धिस्तु ।" 14

Reverence to God. By the favour of the feet
of the Bhadresvaraswami I shall make these agree-
able to Fire. So long as the Sun and the Moon
endure, he (Agni) will save the sons and grandsons
of Dharma Maharaja Shri Bhadravarman, may
the sacrifice be successful through the grace
of the earth.

The shrine of Bhadresvara alluded to in the inscrip-
tions is the earliest royal linga of the Far East
and is represented today by imposing array of
ruined structures in the village of Myson, eight
kilometres to the south-east of the Kun cut rock.
This inscription like the Yupa inscriptions of Mula-
varman of Borneo alludes to the prevalence of
faith in the vedic religion of sacrifice.

Myson Stelae inscription of Bhadravarman begins
"Perfection has been attained. Reverence to Mahe-
svara and to Umaj to Brahma, and to Visnu. Rever-
ence to the Earth, Wind, Sky, Water and the Fire.
Having saluted them I wish all eminent persons
to note the following: That with a view to atone
for all evil deeds and to perform good and virtuous
work and having realised the destiny of human
life, a perpetual endowment has been given to
Bhadresvara by our King Bhadravarman, who is
devoted to the feet of Bhadresvaraswami. [15]

Kaundinya - the founder of the Kambuja Kingdom.

The Myson Stelae inscription of Prakashadharma
(A.D. 637) records the donations made by King
Prakashadharma Vikranta Varman to the Gods
Isanesvara, Shambhu - Bhadresvara and Prabhasa-
vara. It contains the legend of the foundation

of the Kambujan Kingdom by Kaundinya. The inscription narrates:

तत्र स्थापित्वा पूरुषं कौडिन्यसद्विजयम् ।
अथ तस्मिन् विजये द्वाद्दशेण पुत्रादवाप्य तं ॥
.....कुलासीद् भुजगेन्द्रकन्या सोमेति सा वंशकरी पृथिव्याम् ।
आप्रितमवेति विशेषवत्सु या मनुष्यावास समुवासः ॥
कौडिन्यान्ता द्विजपुत्रेण कायर्षिपत्नीत्वमनाये यापि ।
अविष्यतो रस्य निमित्तमवे विघेरचिन्त्यं खलु चेष्टितं हि ॥

Kaundinya got a trident from one of the heroes of the Mahabharata, the Brahmin Asvatthama, son of Drona and in some mysterious manner this enabled him to expose the Nagi maiden Soma who had taken to a human mode of life and enabled her to become the founder of a royal line on earth (वंशकरी पृथिव्याम्) the whole legend is represented as the inexplicable result of the working of fate.

This has a parallel in the Amaravati Stone inscriptions of the Pallavas where Asvatthama's liaison with Madani, the apsara, gives rise to the Pallava line of Kings - so called because of the offspring of the alliance was cradled in a litter of sprouts (pallava).

Kaundinya, Kambu, Bhrgu and Agastya were names warmly cherished in the colonies, as the symbols of the great work of Hinduising and civilizing these extensive lands in which learned Brahmins, actuated by a high sense of duty, they owed to their best, took the leading part.

The inscription of Prakashadharmā recording the construction and dedication of a temple (Pujasthanam) to Valmiki, the sage, says the record was an incarnation of Vishnu and in his grief he uttered a verse that was highly respected by Brahma.

"Yasya shokat samutpannam slokam brahma-bhi pujati
Vishnoh punsah puranasya manusasyat marupinah." [17]

यस्य शोकान् समुत्पन्नम् लोकम् ब्रह्माभि पूजति
विष्णोः पुंसः पुराणस्यः मनुष्येऽस्यात् मरुपिनाः ॥ १७ ॥

In the inscription of Prakashadharmā (Myson Pedestal Inscription of Prakashadharmā), we find reference to another episode of Ramayana. The inscription records the erection of a temple to Kuvera, the friend of Mahesvara by Prakashadharmā.

महेश्वरवत्सेदं कुवेरस्य यन्नाकरं प्रकाशधर्मनृपतिः पूजास्थानमकलयत् ॥
एकादशविंशतिवर्षेण द्वाविंशतिवर्षेण सप्तवर्षेण त्रिंशत्तमस्य ॥ ७ ॥

In other of his inscription Prakashadharmā is himself compared to Rama, the son of Dasharatha, for his nobility, valour and the prosperity of his reign.

अविजयदेवक्यमवदत्तस्वतेजः-समितरिपुसनायः त्रीसल्लेखेनः ।
दशरथपुत्रोऽयं राम इत्यप्राथा यं भयनि निधिपुत्रेणात्रोत्थे युनिरुपमा ॥ ११ ॥

Constantly devoted to the Brahmanas, the gods among men (he was) gracefully attended by enemies subdued by his own prowess; he was the cause of Laxmi's pride; Sri Laxmi in fond hope that he was Rama, son of Dasharatha, dutifully followed him and this was well worthy of her indeed.

The Va Chanh inscription in Champa, belonging to the second or third century A.D. is perhaps the oldest of the Sanskrit Inscriptions. An inscription of Shambhuvarmā records.

गुरु येन त्रियमसिद्धं भुवः स्वः स्वः स्वः
येनोत्तानं भुवनदुरितं वन्निवाधकारम् ।
यस्याचिन्त्यो जगति महिमा यस्य नदिर्न चान्द्रा
चमोदितो जनयतु सुखं शम्भुभद्रेश्वरेश्वरम् ॥ २० ॥

May this Shambhu-Bhadesvara by his own prowess, the three worlds bhuh, bhuvah and svah, have been created. By whom the sin of the world has been removed even as darkness is expelled by fire, whose glory is unthinkable in this world, who has neither beginning nor end (may He) cause happiness in the Kingdom of Champa.

The Duong-Mong pedestal inscription of Prakshadharmā in the district of Quang-Nam refers to the creation of the example of Lord Vishnu.

इदं श्रावतः पुरुषोत्तमस्य विष्णोर्नादिनिघ्नस्याशेषभुवन-
गुरो पूजास्थानं श्रीप्रकाशधर्मणा कारितम् ॥ २१ ॥

The multiplicity of popular gods and religious beliefs is expressed in the Dong-Duong Stelae inscription of Indravarman II dated Somvat 797.

क्वचिदपि बलमिजो ब्रह्मो विष्णुश्च ।
क्वचिदपि भुजगेन्द्रस्वर्गेश्वरश्च क्वचिद् वा ॥
क्वचिद्विषयविचित्रो पाम्पनिर्विकल्पः ।
क्वचिदभयदिव्यस्वस्वमोहाद् बभूव ॥ २२ ॥

As regards Champa, a Sanskrit inscription discovered at Dong Duong (in the ancient province of Amaravati) dated 875 A.D. gives the following legend. A certain Bhrgu had been sent down from heaven to the earth by Isa (Siva) to consecrate the linga of Sambhubhadresvara. Afterwards Sambhu, with a smile sent Uraja (another rsi residing in heaven) in his turn to look after the sacred linga. "Thou art fortunate, Uraja" says Siva, "go down on the earth and take the kingdom". The inscription goes on - "It is from Uraja, that all the rulers trace their descent who since then have occupied the throne of Champapura." [23]

Daily Recitation of Sanskrit Epics

The inscription of Veal Kantāl (found in Tonle Ropen - another province possessed by Siam upto our own times) is important from a historical and literary point of view. It mentions...

"There was the daughter of Sri Viravarman, the sister of Sri Bhavavarman, who was devoted to her husband and to the religion, was like a second Arundhati (the wife of Vashistha). He who took for his wife this (lady) the mother of Hiranyavarman, the moon among the Brahmanas an Akriti Swami (i.e. the master of some Saiva ritualistic system)....the foremost of those who are versed in the Somaveda - he Sri Somasarman, consecrated (this) Tribhuvaneshwara (Lord of the three worlds)

- Siva - together with an image of the Sun, with acts of worship and offerings on a grand scale. With the Ramayana and the Puranas he gave the complete Mahabharata and arranged for a daily recitation without interruption. As long as the glory of Tribhuvaneswara survives, whoever participates in this reading of this great and virtuous deed go to (the credit of) every door of such a pious act." [24]

In one of the inscriptions, we have a reference to a king of Kashmir in a passage with a double meaning - the king (Yasovarman) with his fine army (Pravarasena) having explained to all, the established institution of religion, has outdone the other Pravarasenu (the King of Kashmir) who constructed only an ordinary bridge (who composed a Prakrit poem setuvandhana). [25]

In the 16th stanza, we have a reference to the poet Mayura; - 'The Sun has been satisfied with the engly in verse by Mayura (a peacock or the poet of that name) but the king, to rival the sun, has his feet worshipped by a host of Swamis (or great princes) everyday'. Mayura was the father-in-law of Bana the court poet of Harsha and was the author of the Surya Shataka (hundred stanzas in praise of the sun).

The 39th stanza of the inscription at Loley refers to an episode in Kalidas's Raghuvamsa canto II Even in adversity he never gave up right conduct, just as Dilipa never abandoned the cow Nandini and this right conduct fulfilling all desires (like the celestial cow Nandini) was the source of the prosperity of his subjects. [27]

In stanza 13, p.485 the king is said to be the author of a commentary on the Mahabhashya of Patanjali - "The Bhashya, every word of which troubled the grammarians, as if it were poison from the mouth of the king of snakes (an allusion to the tradition that Patanjali was incarnation of Cesa-Naga) on account of his (the king's) nectar-like commentary, issuing from his auspicious mouth, has again become usable for educational purposes." [28]

This is a reference to Bhagvan Shankara the great teacher of Advaita Vedanta, in an inscription of the reign of Indravarman I dated between 878 and 887 A.D. Sivasoma, the royal guru is described as "he learned sastras from him, who is known as Bhagvan Shankara and where Lotus feet are licked by the row of bees i.e. the heads of all scholars. [29]

A late eleventh century inscription of Jayavarman VI found near Bassac in Laos, gives a beautiful description of the beauty and vast learning of the Lady Tilak.

In her youth not only had she a beauty most excellent coupled with right conduct but by the elders, the royal Guru and the most learned, She was honoured publicly and proclaimed? as the Goddess Vagisvari (Sarasvati) and in contest of learning being reckoned the foremost, she decked with jewels. "she was the mother of the court Pandita Subhadra of King Jayavarman VII. [30]

An inscription in the temple of Ceylon in Prabhavandana Gurukul Kangri Collection, Haridwar

close to the royal palace of Angkor Thom refers to Lord Buddha in its third stanza.

"He who after having himself comprehended, has made the three worlds understand the means of deliverance from the bonds of this life. Salutation to him, who has conferred the blessing of Nirvana, the Buddha of compassionate heart, whose feet are to be adorned." [31]

Installation of Sri-Satya Mukhalinga

Po Nagar Stelae inscription of King Satyavarman dated 706 Saka (784 A.D.) gives the legendary account of a Mukhalinga, in the province of Kuthara by King Vicitrasinga. In the year 696 Saka (774 A.D.) the temple was destroyed and the treasures of the temple, together with the linga were carried away. King Satyavarman pursued the plunderers and defeated them in a naval battle, but could not recover the treasures or the linga. The king then built another temple and installed a new Mukha linga, called after the king Sri Satya Mukhalinga, together with an image of Bhagvati and Ganesha in the year 706 Saka (784 A.D.)

देवदामनमणिमयपुरजैः प्रेतानिककचयज्ञैः -
ममिभैरनिकृष्णस्यपुरैः कोटोपापायकैः ।
शक्ति कोशानुवर्तुने अनघैरुद्धृत्य पोतयते -
देवोद्यैरिव सायुधैस्सुरपुरन्दधन्नेनैसदा ॥

In the saka year denoted by Kosa-nava-rtu (696) ferocious, pitiless dark coloured people of other cities whose food was more horrible than that of the Vampires and who were vicious and furious like Yama, came in ships, took away the Mukha linga of the god and set fire to the abode of the god, as the armed crowds of Daityas did in heaven.

तन्नाशं समस्तस्वीरपुरुषश्चसत्यवर्मा नष्ट-
शत्रुणा नानुदधौ सुपोतसहितः पापाम्भक्तं कुजिनम् ।
हत्वा तद्वहनस्थितं शिवमुखं ससन्निभमजठरे
तल्लिङ्गे स्थितज्ञे नरपतिश्चोचन्नेवद्वयाकुलः ॥

Learning of this raid, King Sri Satyavarma sailed on good ships with his soldiers, and other heroes (officers) and killed those wicked and vicious persons in the sea. But he was very much objected to learn that the Shivamukha, together with its property which was in their ship was thrown into water and that the shivalinga was destroyed.

देवेन्द्रमुनिधिराज्यपरमेश्वरी सत्यवर्मेति यः ।
कोशो सामनमादितुष्यविभवं सत्रप्रतिगतातुः ॥
अदिवेश्वरसन्ततो कृतप्रनाशकः प्रकर्तुं पुन
विजिगृह्य नृप विजिगृह्यो शुभो तदयो न चेत् ॥३२

The king Sri Satyavarma ruling over an excellent kingdom covetable to Indra having resolved to devote himself to the worships of Siva was able to re-install with the pristine splendour, a Kosa (linga) with a face (i.e. Shiva Mukh), together with a beautiful female (Durga) and an elephant (or ganesha, whose face was like that of an elephant) He must be known as king Vicitrasinga (if as the tradition goes) there may not be a second

The Yank Tikuh Stelae inscription of Indravarman I dated 721 Saka records that in 709 A.D. the army of Java coming to Champa by way of sea, destroyed the temple of Siva known as Bhadradhīpatisvara. King Indravarman reconstructed the temple in 721 (799 A.D.) installed an image of the god, to be henceforth worshipped under the name of Indrabhadresvara and made various donations.

King Jayavarman VII ascended the throne in 1181 A.D. The empire reached its zenith under him. He planned a new capital city worthy of his great Empire. This was the famous city of Angakar Thom. The temple of Bayon was constructed during his reign. The account of royal donations engraved in temple reveals the magnitude of his resources and depth of his religious sentiments. Altogether 66625 persons were employed in the service of the deities of temple and 3400 villages were given for defraying its expenses. There were 430 professors and 970 scholars studying under them.

Reference should also be made to two institutions which have a direct bearing on the material wealth and physical welfare of the people. These are the vanigrihas or dharmasalas and hospitals.

King Jayavarman VII of Kambuja founded 121 Vanigrihas and 102 hospitals. Of the latter the site of fifteen can be determined by means of inscriptions which record their foundations. These inscriptions are almost identical and lay down detailed regulations about the hospitals. They give us a very good idea of the system of medical treatment organised by the state.

In the 49th stanza of the inscription at Loley there is an allusion to Susruta the well-known Hindu writer on medicine "with words such as pronounced by Susruta -- he as the sole physician cured all the maladies of the subjects even those of the other world. As this is the earliest reference to Susruta, who has been supposed to have lived much later than the 9th century and about whose very name doubts have been expressed. This passage makes a welcome contribution to the history of Sanskrit literature on medicine. [35]

देहिनाम देहरीगो यन्मनोरोगो रुजरां ।
राक्षसं हि शत्रुं दुःखं दुःखं नाम्नाः ॥³⁶

The bodily pain of the diseased become in him (King Jayavarman VII) a mental agony more tormenting than the former. For the real pain of a king is the pain of his subjects, not of his own body.

The impact of Sanskrit on the society and culture of South East Asia has been aptly summed up by G. Coedes in the introduction to "The Indianised States of South East Asia."

"Culturally speaking further, India to-day is characterised by more or less deep traces of the Indianization that occurred long ago; the importance of the Sanskrit element in the vocabulary of the languages spoken there; the Indian origin of the alphabets with which those languages have been or still written; the influence of Indian law and administrative organization; the persistence of certain Brahmanic traditions in the countries

converted to Islam as well as those converted to Srīnghalese Buddhism; and the presence of ancient monuments which in architecture and sculpture are associated with the arts of India and bear inscriptions in Sanskrit." [37]

NOTES:

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3. Ibid
4. Gonda J. op.cit. p.101
5. Ibid
6. Ibid
7. Sastri Nilakanta K.A., South Indian Influence in the Far East, 1949, p.31
8. Ibid
9. Barth A and Bergain, Inscriptions Sanskrites de Champa et du Combodge V
10. Dawee Daweewarn, Brahmanism in South East Asia, 1982, p.25
11. Ibid
12. Sastri Nilakanta K.A., op.cit. p.35
13. Ibid, p.37
14. Majumdar R.C., Ancient Colonies in the Far East, Vol.I Champa 1927 p.3-4
15. Ibid p.67
16. Ibid
17. Sastri Nilakanta K.A., op.cit. p.56
18. Majumdar R.C., op.cit. p.27
19. Ibid, p.19
20. Ibid, p.11
21. Ibid, p.15
22. Ibid, p.79
23. Ibid, p.83
24. Chatterji B.R., Indian Cultural Influence in Combadia 1928 pp.37-38
25. Ibid, p.126
26. Ibid, p.127
27. Ibid, p.129
28. Ibid, p.118
29. Majumdar R.C., Kambuja Desha 1944 pp.108-09
30. Dawee Daweewarn, o.cit., p.256
31. Chatterji B.R., op.cit. pp.130-131
32. Majumdar R.C., op.cit. pp.41-43
33. Ibid, p.44
34. Majumdar R.C., Ancient Indian Colonisation in South East Asia, 1955, p.80
35. Chatterji B.R., op.cit., p.118
36. Majumdar R.C., op.cit., p.81
37. Coedes G. The Indianised States of South East Asia, 1964 Intro P.XVI

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Question Box

Answer to question (Vol. 4 No.2)

WHAT ARE THE BOOKS WRITTEN IN ENGLISH ON HINDU VASTU SHILPA SHASTRA DURING FIRST FIVE OR SIX DECADES OF THIS CENTURY?

A BIBLIOGRAPHY ON INDIAN ARCHITECTURE

(Compiled by Dr. V. V. Bedekar, Thane, from the old issues of *Shilp Samsar* published from Pune.)

The purpose of giving this bibliography is to show how our ancients had perfected the art and science of architecture like many other sciences right from the days of the Rgveda. It is regrettable to note that even after Independence, Indian architecture does not form a place in the curriculum of the course of studies for Engineering Examinations in the Universities in India. The relevance of Indian architecture in the modern scientific age cannot be overemphasized as the architecture was then developed in Indian conditions, and keeping in view the Indian culture.

The list presented below is not exhaustive but only indicative of the vastness and richness in different aspects of architecture. The reader will find the most scientific terminology standardised and used in these works which goes to prove that the authors and compilers had a deep study and knowledge of the art and science of architecture.

One cannot forget the great contributions made in this field by (1) Krishnaji Vinayak Vaze, (2) Shri Ramaraja, and (3) Dr. Prasanna Kumar Acharya, who with untiring energy and meticulous study have produced very valuable literature on the subject of architecture by studying the various Sanskrit compilations.

K.V.Vaze has covered the entire range of available literature in Sanskrit on architecture and has classified the art and science of architecture in 10 broad divisions, 32 sub-divisions and 64 sections. His classification is based on the *Bhṛigu-saṁhitā*. His writings are in Marathi and English. Shri. Ramaraja has written voluminously on the subject of Ancient Indian Architecture. His book *Essays on the Architecture of the Hindus* is a monumental work dealing with the subject of ancient Indian architecture. The contents of his book reveals how deeply the science had been perfected in ancient times in India and how certain standards had been laid down. Dr. Prasanna Kumar Acharya, has compiled a *Dictionary of Hindu Architecture* and has dived deep into the subject and was responsible for a series of books known as *Mānasāra* in which all aspects of ancient Indian architecture have been treated.

--Editor

Books and Articles by K.V.Vaze

- (1) A list of about 400 books on Śilpa Śāstra compiled by K. V.Vaze appears in *Hindu Śilpa Śāstra*, Pt. I (pp. 16-20) pub. by Bhārat Itihāsa Sāṁsōdhak Mandal, Pune 2.
- (2) *Bhṛigu śilpasamhitā* (Sanskrit)
- (3) *Agastī vimānsamhitā* (Sanskrit)
- (4) *Jāmadagnya dhanurveda* (Sanskrit)
- (5) *Śilpa shikshanāche mahatva* (Marathi)
- (6) *Prāchin Hindi silpasāstrasāra* (Marathi)
- (7) *Kāśyapaśilpam* (Sanskrit). This is one of the 18 *saṁhitās* and is the earliest. Vaze has edited this work and it is published in Anandashram Sanskrit Series, Pune. (p.274).
- (8) *Āryaśilpa - Yāntrasāstra* (Hindi) pub.by Balasastri Ravji Kshirasagar, Pune. (p.46).
- (9) *Āryaśilpa śāstra* (about house-building and use of vegetation) (Marathi). pub.Balasastri Ravji Kshirasagar, Pune.
- (10) *Āryaśilpa chitравид्या i.e., chitralekhā śāstra* (Marathi) pub. Balasastri Ravji Kshirasagar, Pune.
- (11) *Prāchin Hindi śilpasāstra - Nagararachanasāstra* Pt.IV pub. Ichalakaranji Chandra Prasad, Gurukul Kangri Collection, Haridwar.

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- (1) Gatāren (Marathi) in 'Lokśiksan', Marg.saka 1835.
The following articles in Marathi in different issues of 'Udyam' published from Nagpur.
- (2) Grihaśilpa, Dec. 1919.
- (3) Dhātu aṇi khāṇa, Nov. 1921.
- (4) Bhūmi parīkṣā, Feb. 1922.
- (5) Vāsturachanā sāmāna, Aug-Sept.1922.
- (6) Sāmānāche samskāra, Nov. 1922.
- (7) Prāchin Ārya śilpaviśayī upalabdha jñāna, June, 1922.
- (8) Prāchin Hindi śilpasāstra, Jan. 1924.
- (9) Brihatpārāśariya kṛiṣiśāstra, May. 1923.
- (10) Prāchin udyama prakriyā, Aug. 1924.
The following article appeared in Hindi in 'Udyama', Nagpur.
- (11) Śilpasāstrakā vistār, Jan. 1922.

The following articles appeared in other magazines.

- (12) A Study of Building Construction in Ancient Indian Manuscripts - Paper No. LXX in **Bombay Engineering Congress, 1923.**
- (13) Construction of Hindu Temples (Devālayasastra), Vol. VIII, pp. 205-07 in **Annals of Bhandarkar Oriental Research Institute, Pune.**
- (14) Ancient Indian Engineering Philosophy, **Vedic Magazine, Lahore**, May 1922, June 1923, July 1923; 'Mechanics' - Oct. and Nov. 1923; 'Glossary', August, 1923; 'Physics', Sept., 1925; Town Planning, June 1924 to Oct. 1927.

Shri Ramaraja

Another writer of great importance in the field of ancient Indian architecture is Shri Ramaraja, who has written voluminously on the subject of art and science of architecture. His book **Essays on the Architecture of the Hindus** (published posthumously in 1833) is a monumental work on the subject. The contents of the book reveals how deeply the art and science of architecture in ancient times had been studied in India and how certain standards had been laid down. The introduction to the book reveals the importance of the subject, which is unfortunately utterly neglected today and how it is necessary to revive a study of the subject from the Indian point of view. He says in his introduction -

"Works on **Shilpa-Sāstra** are very scarce in this part of the country; and even the few scattered fragments that can be had are scarcely intelligible to our best educated Pandits, as they are so full of memorial verses and technical terms that none but those who have been regularly initiated in the study of the art, can comprehend them fully. As to our **shilpis** themselves, you know they are generally men of very limited acquirements, and totally unacquainted with the science, so that the task of explaining this obscure subject has become exceedingly difficult. I often attempted to unravel it with the assistance of many artists and Pandits who had been supposed to know anything of the matter, and as often despaired of meeting with any success....

"Little did I foresee the extent of the field into which my research has since led me. It is true I have procured for treatises on architecture, sculpture etc., but our best Pandits have given them up as altogether inexplicable; and although these works are all composed in Sanskrit, yet, with the exception of some topics connected with religious rites, sacrifices and astrology, (which occupy indeed a considerable portion of the **Śilpa-sāstra**, and with which we have no immediate concern), I might without any exaggeration affirm that the whole is no more intelligible than the darkest oracles

are, at least, to those who are acquainted with this science itself. Our Pandits, it is well-known are skilful enough in scholastic disputation respecting grammar, logic, and law, to which, perhaps, may be added a qualification, though less general, in mythological poetry and metaphysics, and a partial knowledge of astronomy and medicine; but our architecture, sculpture, painting, etc., have been for ages confined to a class of people whom our ancient legislators have ranked amongst the lower orders of society. This class, perhaps, jealous of the Brahmanas, whose sacerdotal authority they have always opposed with a spirit of independence, or more naturally, apprehensive of competition in their trade, took particular care to conceal the sacred volumes which have descended to them, from the rest of the people, but as they have on their own part been long denied the benefit of Sanskrit literature these treatises could be but of little use to themselves. And the consequence has been, that while the practical part of the science continued to be followed up amongst them as a kind of inheritance from generation to generation, the theory became gradually lost to the whole nation if not to the whole world. Even the few scattered fragments, which have escaped the hand which either jealously or the fear of competition has raised to conceal or rather destroy the science, are now quite unavailable to those who kept them to themselves and to the priests, the former being compelled to refer to the latter for the interpretation of the superior dialect, and the latter to seek from the former for definitions of technical terms, which neither the one nor the other have been able to explain or understand accurately. This circumstance, more than any other, has cost me considerable time and expense, without any advantage. Our best dictionaries, at least the best that I have been able to procure, do not contain a single architectural term. Such is the state of knowledge among those whom we could look for any illustration respecting an art, the study of which has been so long neglected in this country; and the few manuscripts too which have escaped the corroding hand of time, inevitably contain numerous errors and defects which it requires no small labour and time to correct and supply."

Books

Essays on the Architecture of the Hindus.

Dr. Prasanna Kumar Acharya

Another no less important writer is Dr. Prasanna Kumar Acharya, who has compiled a **Dictionary of Hindu Architecture** (1927). Dr. Acharya has dived deep into the subject and brought out a series of books known as **Mānasāra** series in which all aspects of ancient Indian architecture are covered. Dr. P.K.Acharya has contributed the following articles in addition to books which are outstanding contributions in the field of ancient Indian architecture.

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- (6) The Style of Indian Architecture - The Proceedings and transactions of the Third Oriental Conference, Madras, 1926.
- (7) The Mānasāra and Vitruvius - The Allahabad University Studies, 1923, Vol.I, pp.21-62.
- (8) Hindi System of Measurement - The Allahabad University Studies, 1926. Vol.II, pp.43-77.
- (9) Mānasāraṁ - The Sanskrit Sahitya Parishat Patrika, April, 1927, pp.467-77.
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London Calling

THE GREAT BRITISH CONSPIRACY

Part 6

Period 1924 to 1948

1924

"The Taj and its Environments" by M. Ahmad was published. This is the second edition of the book published in 1905 under the title "History of Taj". It now has a foreword by Khan Sahib Saiyed Abu Mohammad, Honorary Secretary of U. P. Historical Society. Mr. Ahmad tells us - (p. 3) the proper name of the princess who rests in the vault of the masoleum was Arjumand Bano Begam entitled Mumtaz Mahal, a name since converted into Taj Mahal by long usage.

p. 3/10.... Mumtaz died at Burhanpur in 1040 A. H. (1630 A. D.) (but no date is given).... The country lamented her loss. (False. Mundy makes no mention). The remains, in accordance with the eastern custom, were deposited temporarily in the Garden of Zenabad near the Tapti in Burhanpur.

p. 13.... Six months after Mumtaz Mahal's death, her remains were conveyed from Burhanpur to the capital Akbarabad under the charge of Prince Shuja and of Satiunnisa Kharum. The Begam and the King's physician Walzir Khan accompanied the escort. Throughout the journey alms in cash and food were freely distributed to the poor for the benefit of the departed soul in accordance with His Majesty's wishes. (Badshahanama, Vol. I, pp. 402-403). Ahmad conveniently forgets next six times. We have to wait for another 46 years for them. (Why did Shahjahan not accompany Mumtaz's coffin to Agra?)

p. 14.... Footnote gives details about Raja Man Singh and Raja Jaisingh. p. 18 (Ahmad does not say when Shahjahan came to Agra but says- 'The preparation of the plan of the intended building was entrusted to masters of the art from distant lands (in such a short time? or were they already assembled at Agra waiting for Mumtaz to die?) Several designs were prepared but none met with approval till the ingenious Afandi presented this. From this a model was at once constructed in wood in 1630, the very year of Mumtaz Mahal's death, commenced the building of the Mausoleum (102) (Wonderful! Shahjahan came to Agra on June 1, 1632 as noted by Peter Mundy to whom Ahmad refers to, on the very next page.)

p. 18 to p.23.... Ahmad gives his reasons for discarding Verrones as the architect of Taj. He, however, says.... another French historian Thevenot visited Taj in 1666. This is false. He also refers to "The English Factories in India" by W. Foster but forgets references to Tajgani in their factory records.

p. 32.... A flight of stairs consisting of 34 steps brings us to the very top (i.e., roof of main gateway). Here are four towers at the corners. They are crowned with cupolas topped with brass

"Kalases".... originally all of them had a coating of gold. But the Jats despoiled them of it, during their sway. (Jats must have been ingenious. They removed the golden coating and left the brass 'Kalases' intact! Even to-day's scientists cannot manage that.)

p. 34.... The reservoir has to its right and left two gay edifices, three stories high abutting upon the rampart (i.e., Nagarkhanas).... The western is an exact of the eastern. At the foot of the staircase to the former is a recess of the garden repose the ashes of a holy man.

p. 33.... Map of Taj Mahal complex is copied from Keene's book of 1909 but the north line is clearly missing.

p. 35.... In the garden, Ahmad tells us, are trees of Bel Motia, Champa, Harsinghar, Jooi, Ketki, Mulsiri, Keora, Seoti, Suraj-mukhi.... etc. (All these names are printed in italics). Leaves and flowers of these trees are used in the worship of Hindu deities. Bel leaves are used only for the worship of Lord Shiva.

p. 36.... The story of temporary repository of Mumtaz's remains is repeated. The size of the temporary tomb is given as 19' x 16' x 6½'. How does one build a dome on a rectangle? And why should this dome disappear while others remained intact?

p. 40/41.... The figure of Kalasa () is exactly copied in black stone inserted in the surface of the platform of the cloister on its (Jawab's) northern side. The whole Kalasa is 30½ ft. The right base of the crown is 8½ ft. The diameter of the globe is 4½ ft. The neck is 5½ ft. The globe is over it 3¼ ft. The arc of the crown is 9¾ ft. and the chord 5 ft. (It is interesting to note that the Sanskrit word 'kalasa' is used throughout to describe the pin-nackle.)

p. 46.... In the centre of those structures (i.e., in the cenotaph chamber) lie the receptacles which hold the ashes of Shahjahan and Mumtaz Mahal. (What does Maulavi M. Ahmad imply?)

p. 57.... It is said that while on his death-bed, Shahjahan implored Aurangzeb to carry out the scheme he had in heart (i.e., of his mausoleum on the other side of the river). (Note - Shahjahan was at Agra and Aurangzeb at Delhi. They never met after Shahjahan was imprisoned!).... "My father", said Aurangzeb, "loved my mother dearly and it is, therefore, quite befitting that their ashes should repose in the same place."

Second edition of E. B. Havell's "A Handbook to Agra and Taj" was published. In the appendix he deals with "the designers of the Taj". Therein he says, ".... Thavenot, who saw the Taj in 1666...." This is false. See events of 1949. "Murray's Handbook to India" was edited by Sir J. C. Cumming K. C. I. E., C. S. I. Taj Mahal is described on pages 237 to 240.

p. 237/238.... Inside the Court are two tombs raised

on an upper storey in the S. W. and S. E. corners (but no names!).

p. 239.... It was seriously proposed by a Governor General of India to demolish the Taj and sell the marble ; but that was many years ago.... In footnote 2 we are told, "It is not probable that Taj was ever used as a pleasure palace". No reasons are given.

p. 240.... On the pavement in front of the jawab is a representation of the finial of the Taj.

- Gandhi was elected the President of the Indian National Congress.

1925.

- Maharashtra Dnyanakosh, an Encyclopaedia in Marathi language was published. It came as a great surprise to all Indians who never thought it possible to compile an encyclopaedia in Indian language. The contributors, however, simply copied what Sarkar said in 1912. Indian historians, later on just followed the Dnyanakosh.

W. H. Moreland's "Jehangir's India" was published. This is a translation of Pelsaert's "Remonstrante" of 1926. In the preface Moreland tells us ".... Pelsaert worked as a Senior Dutch Factor at Agra from 1620 to 1626.... He had mastered the language of the country.... His spellings of Indian names are remarkably accurate...". "Remonstrante" was written in 1626- basically a commercial report. "

Pelsaert describes Agra on pages 1 to 5. He says, ".... The breadth of the city is by no means so great as the length, because everyone has tried to be close to the river bank and consequently the waterfront is occupied by the costly palaces of all the famous lords.... and extend for a distance of 3½ Holland miles (10½ English miles)... Beginning from the north, there is the palace of Bahadur Khan, Raja Bhoj,.... then begins the Fort.... After passing the Fort there is Nakhas, a great market.... beyond it lie the house of some great lords, such as Mirza Abdulla, Aga Nur, the late Raja Man Singh, Raja Madho Singh.

On the other side of the river is a city named Sikandra, well built and populated, but chiefly bania merchants...."

Tavernier's "Travels in India" was edited by William Crooke of the Bengal Civil Service. In the preface he tells that Dr. Valentine Ball revised his 1889 edition but died before he could publish the revised second edition. William Crooke was allowed by Mrs. Ball to publish it, and he has made several corrections. Crooke tells us -

p.XXXII... The most important question connected with Tavernier's work is the credibility of the narrative. Lord Curzon dealing with his Persian travels writes ".... Chardin said he (Tavernier) never understood a word of Persian... His description of some places are manifestly incorrect...."

p.XXXIII Whatever may have been his knowledge of Persian, it is certain that he had little or no acquaintance with any of the languages of India and he was obliged to be guided by an

through an interpreter. It is now impossible to say what record in the shape of notes or diaries he kept during his wanderings; his book gives no information on this point.... For matters of which, he was not an eye-witness and he depended on the merchant's tales current in ports and cities which he visited... Unfortunately neither of these writers (i.e. Tavernier and Dr. J.Fryer), thought it necessary, to distinguish clearly between information based on their own experience and that acquired and in the case of Tavernier, from Shipmasters or other travellers, particularly the priest and friars of the Roman Catholic Church, whose friendship he enjoyed.

p.XXXV.... Since the publication of the first edition in 1889, many important works increased our knowledge. It is necessary only to mention the new edition of the Imperial Gazetteer ; Dr. Vincent Smith's History of Fine Art in India and Ceylon and Oxford History of India, Mr. W.Irvin's edition of Niccolao Manucci's Storia do Mogor, the editions of Bernier's Travels in the Mogul Empire, Sleeman's Rambles and Recollections of an Indian Official....

.... We must remember that he was not a scientifically trained observer who visited India with the intention of describing the Country and its people. He observed it from the point of view of a merchant.

p.XXXVIII....To the archaeologists the evidence of Tavernier is of importance.

p.XXXIX.... I am indebted to many authorities.. Mr. W.Foster C.I.E. late Registrar and Superintendent of Records of India Office... Rev. H. Hosten Society of Jesuits...

On pages XI to LIX we find some additional notes on Tavernier's History and Geography by H. A. Rose of Jersey. At the very beginning he says, "As a historian Tavernier is not always to be trusted".

p.XIIV ---- Tavernier was certainly not always an eye witness to events which he claims to have seen.... Tavernier's account of Bijapur has raised a surmise that he never visited that city.

p.86 footnote - The Taj at Agra was built between 1632 and 1653 but the central mausoleum was ready in 1643. (Smith - Oxford History of India, 420 f).

p.87 footnote ---- For buildings at Agra see Sleeman's - Rambles 312 ff and Syad Muhammad Latif - "Agra". Tavernier's visit was probably in 1648 as he would not have been admitted (to Agra Fort) while Shahjahan was imprisoned there from 1658 till his death in 1666. (And yet in the Introduction, Dr. Ball told us 36 years ago, that the route of Tavernier's third voyage was Surat - January 1645, Daulatabad - Nander - Golconda - Persia - end of 1647 Vengurla - January 1648, Goa - Bantam - Sumatra

- Batavia - Paris - Spring of 1649. How could Tavernier be in Agra in 1648 ? Tavernier was at Agra during the winter of 1640 - 41 and at that time Shahjahan was at Lahore, how could he, therefore, see the Agra Fort then ?).

p.50 footnote 1... The Taj known as Taj-makan, 'Taj house', Taj-mugam, Taj residence, one of which is represented in Tavernier's Tasimasan, Taj-Mahall, Taj-palace or Taj-ganj, Taj-bazar was erected as the tomb of Arjumand Banu Begam known as Mumtaz Mahal....for the history of the building see Bernier, Sleeman, Mundy, Syad Muhammad Latif.

p.91....footnote 4 - This is a mistake: Jahangir was buried at Shahdara, Lahore (and not near Agra as Tavernier states - see events of 1889).

There are clear references to Mandelslo on pages 6 and 146.

- Chittaranjan Das and Surendranath Banerjee die.

1926

C.V. Vaidya's 'History of Mediaeval India' was published.

1927

"Travels of Fray Sebastian Manrique" was translated by Lt. Col. Lurat C. I. E. and Father Hosten, was published by Haklyut Society. In volume II, pages 171 to 174, Manrique tells us:

".... The other Mausoleum, the work, as I remarked of the Emperor Corrombo, dedicated to the unhappy memory of his chief and most beloved wife and Begoma (Manrique does not say Shahjahan nor does he give the name of his wife) stands at the opposite end of the town. On this building, as well as on other works, a 1000 men were usually engaged (not the magic figure of 20,000 men), overseers, officials and workmen; of these many were occupied in laying and in ingenious works and gardens, others planting shady groves and ornamental avenues; while the rest were making roads and those receptacles for the crystal waters, without which their labour could not be carried out (no masons, no stone cutters; or brick layers, not one even mixing mortar !).

The architect of these works was a Venetian, by name Geronimo Verones who had come to this part in a Portuguese ship and died in the city of Lahore, just before I reached it. (So who told Manrique that Verones was the Architect ? What was he doing at Lahore 400 miles away from Taj ? What buildings in Venice did he design and supervise ? Manrique does not answer a single question).

The Emperor Corrombo paid him a very high salary....fame, the swift conversion of the good

and evil news had spread the story that the Emperor summoned him and informed him that he desired to erect a great and sumptuous tomb to his dead wife, and he was required to draw up some designs for this, for the Emperor's inspection.

The architect Verones carried out this order and within a few days proved the great skill he had in his art by producing several models of the most beautiful architecture. (What a great pity ! not one of these models has survived ! It is also very surprising that no one saw, any of the models. Manrique does not say that; one of them was selected and approved. In fact he admits that all this is nothing more than a story). He (Shahjahan) told Verones to spend 3 crores of rupees that is 300 lakhs and to inform him when it was expended. In the footnotes Col. Luard tells us -

"This is the famous Taj Mahal... The tomb is that of the Emperor Shahjahan's favourite wife Arjumand Bano Begam Mumtaz Mahal.... She died at Burhanpur in childbed soon after the birth of her daughter Gauharara, on June 17, 1631 (new style) (17 Zil Qada 1040 A. H.) and was first buried there in a garden, then called Zainabad, her remains being removed to Agra later on..."

...The tomb was commenced in 1631 and completed in 1648. At the time Manrique saw it, work seems to have been going on somewhat slowly, if as he says, only 1000 workmen were being employed. But his figure is certainly a rough one. Tavernier (Ball Vol.I. p.110) says, "he saw the commencement and accomplishment of this great work on which they expended 22 years, during which 20,000 men worked incessantly". (Col. Luard, just like Vincent Smith, conveniently forgets that Tavernier and Manrique came to Agra at the same time, i.e., the winter of 1640-41)... Manrique, moreover, is writing long after and without notes and again his visit seems to have been cursory. And all because his testimony does not confirm the popular legend created by Tavernier's book, in circulation since 1677. If not, things would have been described differently by Col. Luard.

.... Rupees three crores (i.e. 300,00,000) at 2 Shillings to the rupee, £ 3 million (rupee was then more like 2 shillings and 6 pence. (This figure of £ 3 million has been copied by others. See events of 1844, 1859 and 1929.) Father Hosten tells us in footnote No.10.)

Verones died at Lahore on 2nd August 1640. Manrique reached Lahore in February 1641, some six months after Verone's death. Answering an objection to Verone's claim to be the Architect of Taj Mahal, Father Hosten tells us -

"....What Mundy saw must have been the work of levelling the hills, the raising of the terrace on which Taj was built..." ("Father ! Dear Father !! Mundy says quite explicitly that the hills were being levelled so that, they might not hinder the prospect of the Mausoleum; and the raising of any terrace. Taj does rest

on a filled up terrace. There are at least two storeys, under the so called real grave chamber, and they have been sealed up...as for the gold railing, it was at the temporary tomb. (Why should anyone erect a golden railing studded with gems and costing £60,000 in 1630 A.D. What price, around a temporary tomb? Shahjahan came to Agra on 1st June 1632. Mundy left Agra on 25th February 1633. Can such a costly railing be thought of, designed, fabricated and erected in 9 months? And if a golden railing was provided around a temporary tomb, why was the same (or similar one) removed from around the cenotaph in 1642 for the fear of theft? Was there no such fear in 1632-33? Father Hosten does not raise these questions!)

....At any rate, all of us who have some experience of historical research will be ready to admit that the silence of a score of writers does not weigh against one clear, circumstantial, uncontradicted testimony, such as Manrique's. Manrique's testimony would indeed be of considerable importance, if it was reliable, unimpeachable and unquestionably true. But was it? Let us read a few footnotes by Col. Luard -

p.170....The account given shows that Manrique's description is mainly from hearsay.... Mundy notes that no one could enter the tomb of Akbar.

p.199....The whole description of the palace and throne is unconvincing and looks as if it was taken from some account Manrique found and perhaps from what he read.

p.203....It is worth considering how much of this account refers to what was actually seen by Manrique and how much he derived (as he is entirely devoid of scruple in such matters) from what he read.

p.274....One cannot accept this statement reliable in view of the proofs of Manrique's plagiarism from De Lact.

These are just few examples. And if they are not sufficient, Manrique even claims to have seen Shahjahan and Asaf Khan having dinners with their ladies! Something which even the highest noblemen would not have dared to do. Manrique says "A eunuch conducted us there and warned us not to make sound....When the time came and Emperor entered, accompanied by a large bevy of gallant handsome women....Following the lovely of women came and the Emperor between his mother-in-law and his daughter, leading the former on his right and the latter on his left.... First of all four lovely girls, relations of Prince Asaf Khan and daughters of great noblemen entered....The dinner was brought in rich golden dishes....When the feast reached this stage, our eunuch returned to fetch us, telling us it was time we left, for, if we stayed to the end it would be very difficult for us...." (Vol.II, pp.213 to 220)

Neither Col. Luard nor Father Hosten make any comments on such a fantastic claim. They express no surprise. In a footnote we are merely

told "it appears that parda (veil) was not maintained among such near relatives. In many Indian Musalman families however, it is curiously strict now-a-days and no such meeting, as is here described would be possible". These gentlemen conveniently forget to tell us that, had Manrique even come within talking distance from where the ladies of the harem were present, he would have been cut to pieces by the eunuchs. In this connection, also see the events of 1879. The question is not whether such a meeting was possible, but whether Manrique could have seen it at all!

Both gentlemen had lived and worked in India. Father Hosten lived in Calcutta and belonged to the Society of Jesuits. Luard was an officer in the 8th Gurkhas for six years (1890-96) and was later entrusted with political work in Central India (1897-1925).

Col. Luard disagrees with Father Hosten. He says, "....Personally I would limit Verones' connection with the building, if any is allowed to him, to the mural decorations which are similar to "pietra dura" work. That he should have been its architect seems highly improbable. He was no architect to start with, and great technical skill was required to erect an edifice such as the Taj...." (At least one person has shown some commonsense!).

In the bibliography there are references to Imperial Gazetteer of India, De Lact Joannes (see events of 1928) and Voyages and Travels of Mandelslo.

1928

"The Empire of the Great Mogol" by De Lack Joannes was translated by J.S. Hoyland and annotated by S.N. Banerjee. Joannes' book "Imperto Mogni Mogoli" was originally published in 1631. He obtained his information from Pelsaert's report and other Dutch East India Company's records. He says on pages 40/41- "... On leaving the Red Fort of Agra one comes to a great market....beyond the market are the palaces of Mirza Abdulla, Aga Nours, Zehenna Khan, Mirza Khrom, Mahabat Khan, Khan Alem, Raja Bartsing and "Raja Man Singh".

If we compare the above list with the one given by Pelsaert, we find Raja Madho Singh's palace (beyond Raja Man Singh's) missing.

Lala Lajpat Rai beaten to death during "Simon Go Back" demonstrations.

Centenary of Col.Hadgeon's unintentional survey of Taj Mahal and yet Archaeological Survey of India did not produce anything worthwhile on it.

(Contd. on page No. 133)

1936-37

Annual report of the Archaeological Survey of India provides some very interesting information.

Section I - Conservation

UNITED PROVINCES

by

Khan Bahadur Maulvi Zafar Hasan

"....The compound wall of the Taj on the riverside which is really the plinth of the northern terrace, unlike other sides, is richly ornamented with carving and inlay of white marble in red sandstone (Plate II a) crowned by a balustrade. It is 36 ft. high and a stairing runs along its entire length about the middle, marking the level of the underground chambers at the north terrace and the corner bastions.... Another interesting feature revealed in the riverside wall, is a platform at the plinth level projecting 3'-6" beyond it and running further to the east, as far as the mihrab projection of the Jawab. This was hidden under the heaps of silt and debris, the accumulation during ages, until it was incidentally brought to notice this year, in the course of repairs to the foundation walls under the northwest (Plate I a)... a few stone rings built into the masonry under the platform apparently for mooring of boats, have also been discovered. It may be safely concluded that the platform was intended as a landing stage and this view receives support from the remains of an old ghat where boats used to be kept. A staircase in each of the north-east bastions gives access to the river, and the indications detailed above together with the profuse decoration of the riverside wall tend to show that boating in the Jumma (river) had been in view when the Taj was designed, that provision for it was made in the Scheme and that it was a favourite pastime of the Mughal Emperors. ("This is so precisely because Taj Mahal is a temple-palace. No one would go for boating next to the burial place of one's beloved.)"

1937

Cambridge History of India Vol. IV, dealing with the Mughal period was published. It was planned by Lt. Col. Sir Wolseley Haig, K.C.I.E., C.S.I., and was edited by Sir Richard Burn, C.S.I.

On p.220 Sir Burn tells us ".... of the most conspicuous erections of which he (Shahjahan) was the founder, the first to begin (in 1632) was the Taj at Agra to contain the tombs of his wife". In a footnote he says - "The first part of her title 'Mumtaz Mahal' has been corrupted into Taj." (This is utter nonsense. See events of 1914.).

Taj Mahal is described in detail on pages 561 to 567 by Percy Brown, formerly Principal of the Government School of Art, Calcutta and a Fellow of the Royal Asiatic Society of Bengal. He tells us ".... Architects were, therefore, summoned

to prepare designs for a Mausoleum (Brown does not mention any name). Of the manner in which the design was obtained and who was responsible for the noble building which eventually matured, there are no direct records. (How interesting!) What evidence is there is contradictory. On the one hand, there is the contemporary statement of Father Manrique, who definitely affirms that models were prepared and submitted to the Emperor by a certain Geronimo. Verrones, a Venetian who was residing in the Mughal capital at the time. (Not quite so. Manrique himself admits that this is nothing more than a story. See events of 1927... The truth seems to be that Verrones was invited, as were others, to produce designs, but that prepared by the Mughal master-builders was the one eventually selected. (Those chaps were master-builders but they had no names.).... The chief Supervisor who coordinated the entire work was one Ustad Isa. (What previous experience of such coordination did this Ustad Isa have? Brown says nothing.) At the same time, its proximity to the river, demanded special care in the preparation of the foundations, which it was the practice of the Mughal builders to support on masonry cylinders. Some such system was no doubt employed in the structure of the terrace. (Of course! of course!! How can a building be built without a foundation? But Brown quotes no reference from any Court chronicle.)... For the centering of the dome timber scaffolding supplemented by brick was employed, as noted by Tavernier. (False. Tavernier says, "....It is said that the scaffolding alone cost more than the entire work because for want of wood, they had all to be made of brick as well as the supports of the arches." (By this time Tavernier's book had been on the market for 250 years.) The mausoleum of Shahjahan's queen was intended, however, as only one part of a more comprehensive architectural scheme....Tavernier definitely states that "Shahjahan began to build his own tomb on the other side of the river, but the war which he had with his son interrupted his plan..." (So it always boils down to Tavernier.)

Complaints about cracks in Taj Mahal appear in "Hindustan Times" p.7 dated 11th November 1937).

1938

Bharatiya Vidya Bhavan was founded by K. M. Munshi.

10th edition of Sir Bannister Fletcher's "A History of Architecture" was published. He reproduces the cross-section through the central edifice from Ferguson's book. But he not only removes the basement floor around it (which is sealed). Why?

1939-45

Second World War.

1940

At Lahore session, All India History Congress resolves to write a comprehensive Indian History in 12 volumes. (Muslim League passed Pakistan resolution at Lahore on 24th March).

- Sir Michael Odwyer, Governor of the Punjab at the time of Jalianwala Bagh Massacre, was shot in London by Udham Singh.

1941

- Government of India appoints a Committee of five experts to look into the cracks in Taj Mahal. Next year five more experts were added.
- Mr. P.N. Oak joins the Indian Army. Next year he is taken prisoner of war by the Japanese in Singapore (Feb. 1942).

1942

Final Report of the Advisory Committee on the Restoration and Conservation of the Taj Mahal was published. Many authors have referred to it but I was unable to obtain a copy.

Indian Architecture (Buddhist and Hindu Period) by Percy Brown was published. In Chp.IX Buildings in Brick, he says "...Mahmud's (of Gazni) own account of architectural magnificence of Mathura, before he destroyed it, that it contained more than 100 structures, the greater number in marble, speaks for itself...." This happened in 1020 A.D. Thus Hindus have and continued to build marble temples, centuries before Shahjahan.

Percy Brown also published Indian Architecture (Islamic Period). In addition to what he said in Cambridge History of India, Vol. IV, (see events of 1937), Brown tells us :

p.116..."On the traditions therefore of Humayun's tomb on the one hand and with the experience gained from that of the Khan Khanam on the other, Shahjahan's architects evolved this masterpiece of the builder's art...one of the most striking facts in connection with the architectural projects of this period, is the amount of preliminary thought that must have been expended on them before the actual construction was begun.

The building art as practised by the Mughals, permitted no subsequent amendments or after thoughts, each undertaking was initially perfected in all its parts with every need anticipated. (Brown does not explain, the purposes of Nagar Khanas (drum houses) and Jawab and also the several

chambers which remain sealed even today. Moreover Shahjahan came to Agra on 1st June, 1632, Peter Mundy left Agra on 25th February, 1633, just nine months later. Was that sufficient time for all the planning involved? Mundy says "there is already about her tomb, a rail of gold". How is this feasible in a new construction?).

p.118...."That it was Shahjahan's intention to duplicate the entire scheme of the Taj, by the erection of another Mausoleum in black marble to enshrine his own remains, on the opposite bank of the Jamuna and to connect the two by a bridge, seems fairly well established (i.e. the story was repeated many times).... Whether this monarch even with all his vast resources could have carried out such an extravagant and spectacular project, will never be known, but that he had the vision to contemplate, it is an indication of the unlimited extent of his architectural ambitions".

In the bibliography, Brown refers to Hodgson's paper of 1843.

1943

The Aligarh session of the All India History Congress sets up a central committee for compiling comprehensive Indian History. "Report on Repairs to Taj Mahal, Agra" by the India Water-proofing Company, Bombay, was published for private use only. Taj Mahal was visited by W.S. Mascarenhas, Principal, College of Engineering, Poona, N.S. Gupehup, Professor of Civil Engineering, College of Engineering, Poona, Mohammed Deen, Chief Engineer, the India Water-proofing Co., Bombay. The three members made their inspection on 29th and 30th June, 1943. Their report seems to be damning indictment on the 1942 report of the Committee of the ten experts appointed by Government of India. It seems that those so called experts had no knowledge of civil engineering.

1944-48

Sir Mortimer Wheeler serves as Director-General of Archaeological Survey of India.

1944

Bharatiya Vidya Bhavan, Bombay, starts the work of compiling Indian history.

1946

Nehru's famous book "Discovery of India" was published. He says, "India and Iran.... A new architecture developed in India, a combination of Indian ideals and Persian inspiration, and Delhi and Agra were covered with noble and beautiful buildings. Of the most famous of these, the Taj Mahal. M. Crousset, the French Savant said, that it is the 'soul of Iran incarnate in the body of India'....

"Development of a common culture....But the (Mughal) court continued to be brilliant and the fame of the Grand Mughal spread all over Asia and Europe. Beautiful buildings combining the old Indian ideals in architecture with a new simplicity and a nobility of line, grew up in Agra and Delhi. This Indo-Mughal art, was marked in contrast, with the decadent, over-elaborated and heavily ornamented temples and other buildings of the north and south. Inspired architects and builders, put-up with loving hands the Taj Mahal at Agra".

Aurangzeb puts the clock back - Growth of Hindu Nationalism - Shivaji.

Shahjahan was a contemporary of Louis the XIV of France.... As Versailles took shape, the Taj Mahal and Pearl Mosque grew up in Agra and the Jami Masjid, Diwan-i-Am and the Diwan-i-Khas in the imperial palace. These lovely buildings with a fairy-like beauty represent the height of Mughal splendour...." (1974 Edn. pp.148, 265, 270.)

"Marg" magazine, devoted to art and architecture was started in Bombay (October 14). General Editor - Mulk Raj Anand. Contributing editors - Hermann Goetz, Rudy Van Leyden and others.

After a gap of nearly 8 years, Archaeological Survey of India (ASI) starts to publish an annual bulletin entitled "Ancient India". In it we find "Repairs to the Taj Mahal" by M.S. Vats, Superintendent of Northern Circle. ASI (pp.4-7). He tells us - "The Taj contains the remains of Emperor Shahjahan and of his favourite wife, Arjumand Banu Begam better known as Mumtaz-z-Zamani or Mumtaz Mahal. She died on the 7th Ziga'da 1040 A.H. (28th June, 1631 A.D.) at Burhanpur. Her body was temporarily interned in the garden of Zainabad, when under the orders of Shah Jahan, it was brought to Agra after six months on the 17th Jamadi I 1041A.H. (11th Dec., 1631 A.D.)

"In the meantime a suitable site was selected which being the garden of Raja Jai Singh of Jaipur, was duly exchanged for equally valuable land, and her remains were again temporarily deposited near the present Baoli in a domed structure on 15th Jamadi II 1041 A.H. (8th Jan., 1632 A.D.) till their permanent burial in the mortuary chamber of the Taj. ("Note: Where was the coffin kept for 38 days ? and what was the date of permanent burial ? Mr. Vats does not say.") The question as to who designed the Taj is disputed, but there is epigraphical evidence to show that, he was Usta Ahmad of Lahore. The Mausoleum was constructed under the superintendence of Makramat Khan and Mir Abdul Karim, the dome being built by Ismail Khan of Turkey.... The tomb was begun in 1041 A.H. (1631 A.D.) and completed in 1057 A.H. (1648 A.D.) with the mosque on the west of the Jawab or Mihmankhana on the east and the main gateway on the south, the outer court and its cloisters being added subsequently and completed in 1653."

Mulla Abdul Hamid Lahori, who was instructed by Shah Jahan to write a detailed history of the

Taj (but he tells virtually nothing), further informs us in the Badshahnama that the foundation was laid on the sub-soil water lever, that the masonry below the ground is stone in lime and that the platform above the ground is the brick in mortar, faced with marble veneer. (As far as we know, the structure is constructed of brick work. Red sandstone and marble are used for lining only. There may be a few courses of stone masonry on the riverside, below the 1000 x 3½ ft. platform). Owing to the proximity of the river the whole fabric together with the four corner minars, has been made to rest on a firm bed of masonry which seems to have been supported on piers sunk at close intervals in accordance with the usual Mughal practice. (What are sunk are foundation wells and not piers).

....The recorded expenditure of 50 lakhs of rupees is rightly construed to mean that the above amount was expended on miscellaneous petty charges and the wages of 20,000 workmen etc., who worked at the Taj for so many years.

.....The earliest record of its repairs is available in a letter dated 1652 A.D. from Prince Aurangzeb to his imperial father Shah Jahan wherein he points out defects in the dome and vaults of the Mausoleum, saying, "the dome of the holy tomb leaked in two places towards the north during the rainy season and so also the fair semi-domed arches, many of the galleries on the second storey, the four smaller domes, the four northern compartments and the seven arched underground chambers which have developed cracks. During the rains last year the terrace over the main dome also leaked in two or three places. It has been repaired, but it remains to be seen during the ensuing rainy season how far the operations have proved successful. The domes of the mosque and Jamayat Khana leaked, during the rains and were made watertight. The master builders are of the opinion that if the roof of the second storey is re-opened and dismantled and treated afresh with concrete, over which half a yard of mortar grout is laid, the semi-domed arches, the galleries and the smaller domes will probably become watertight, but they say that they are unable to suggest any measures to the main dome...." History is, however, silent about the actual steps taken by the Emperor.

....In 1874, Mr. Alexander, Executive Engineer, Agra, carried out more extensive repairs The principal items were... the regilding of the finial surmounting the main dome (It must have been taken down. How is the finial fixed at the top of the dome where brickwork is 8 ft. 6 inches thick, plus thickness of brickwork below lotus petals ? It also weighs about 2 tons.

....the dead line plaster from inside the dome has been removed only to a height of 10ft. all round except on the west where it has been stripped to the full height of 61 ft....This also has revealed an interesting feature. Covering the entire surface of the lower part of the drum, there is a regular and continuous series of eight

relieving arches which adds to the strength of the structure.

An Encyclopaedia of Hindu Architecture by P.K.Acharya was published.

1948

14th edition of Sir Bannister Fletcher's book "A History of Architecture" was published. Plan of Taj Mahal is copied from Keene's Handbook to Agra of 1909. The north line is clearly missing. The scale is 1 inch to 557 ft. R.F. 1/6678.

SUMMARY OF EVENTS AND EXPLANATORY NOTES

1. Politics and archaeology

Sir John Marshall - the famous archaeologist, was Director-General of the Archaeological Survey of India (ASI) for 29 years (1904-1933). Sir Mortimer Wheeler, another famous archaeologist held the same post during 1944-48. Both ensured that an archaeological survey of Taj Mahal was not done.

In 1934, Mr.R.S.Varma of ASI discovered a flight of steps in the western perimeter wall, just south of the doorway near the Baoli Burj, but ASI made no further exploration and on the contrary even this discovery was never mentioned by them.

In 1943, when the lime plaster was removed from inside of the drum of the main dome, a series of eight continuous arches were discovered by ASI but no diagrams, sketches or photographs, wherever produced by the officials.

2. The Conspiracy grows

We have already noted how, in 1904-05 Government officials and some well-known authors mischievously changed the term "Raja Man Singh's Palace" into "Raja Man Singh's piece of land". Crooke in his 1925 edition of Tavernier's "Travels in India" refers to Latif's book of 1396, but keeps quiet, about what Latif really says. Mr.M.S.Vats in his paper "Repairs to the Taj Mahal" of 1946, reiterates that the garden of Raja Jaisingh of Jaipur was exchanged for equally valuable state land.

De Lact Joannes gives a list of palaces south (or downstream side of river Yamuna) of Red Fort of Agra and this includes Raja Mansingh's Palace. Luard and Hosten refer to Joannes in 1927 but do not publish this list of palaces.

Mandelslo - a German visitor, was in Agra in 1638 and describes in detail Agra City, customs of those days and wealth of Shahjahan. But he does not make a slightest mention of Taj Mahal or Mausoleum of Mumtaz being built by Shahjahan. Crooke, Luard and Hosten refer to Mandelslo but do not mention this fact.

Tavernier's book was annotated in 1889 by Dr.V. Ball. He gives detailed routes of the voyages. From this, it is quite clear that Tavernier was in Agra only in the winter of 1640-41 and in 1665. Crooke published the next edition (prepared by Dr. Ball) in 1925. Referring to Tavernier's visit to the Royal Apartments in the Red Fort of Agra, he mischievously adds that this was in 1648, as many had maintained that the central edifice was completed by that year and Crooke decided to give some credibility to Tavernier. He had no excuse.

In 1942, Percy Brown refers to Hodgon's paper of 1843 but does not quote the vital sentences which we have pinpointed. And in addition he creates the fantasy of Shahjahan's intended mausoleum in black marble.

3. History of Architecture

Books of Percy Brown (1942) and Prof.C.Batley (1934) have become standard textbooks for students of architecture in India over the last two generations. Both strictly adhere to Ferguson's line of thinking but omit the cross of the central edifice. Batley even admits that the layout of Taj Mahal is similar to that of a Hindu temple or temple town.

4. British and the Indian History

Cambridge University decided to start compiling Indian History in 1913. The first volume came out in 1922. As a typical example of the British mentality, let us refer to p.140 of that volume. Prof. A. B. Keith of Edinburgh University says "it remains, therefore, as the most plausible view that the Nakshatras (constellations) was derived from Babylon, though direct proof of the existence of the Nakshatras there has yet to be discovered." Thus the Babylonians may not know about Nakshatras but Indians must have borrowed the concept from Babylonians ! (A white lie). We already know about Vincent Smith. His Oxford History of India was published in 1919 (period up to 1911) revised in 1923 (period up to 1921).

Catherine Mayo's infamous book "Mother India" was published in 1927. A strong letter of condemnation was sent to the Times (of London), jointly by Sir Tejbahadur Sapru, Barrister Setalwad and Wrangler Paranjape. The editor flatly refused to publish it. That is called fairmindedness of the British ! "Uncle Sam", a fitting reply to Miss Mayo's book, was published by K.L. Gauba in

5. The Awakening

The awakening of Indian intellectuals continued. Thus, we find -

1925 - Maharashtriyā Dnyanakosh an Encyclopaedia in Marathi language was published by Dr. Ketkar - a formidable work indeed, considering that no funds were provided by Government or business men.

1935 - First, Modern History Congress held its Session in Pune. Later it became All India History Congress (IHC)

1938 - Bharatiya Vidya Bhavan (BVB) was founded in Bombay by Mr. Kanahyalal Munshi (later a Union Minister).

1940 - IHC resolves to compile Indian History in 12 volumes.

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which discussed (1) Vedic Studies, (2) Sanskrit Grammar, (3) Hindu and Buddhist Philosophy, (4) Buddhist and Hindu Religion. Among other subjects discussed were (a) Sanskrit & Computer, (b) India and the West, (c) Women in Ancient India, (d) Indian Science, (e) Indian epics, (f) Analysis of literary forms, (g) Contemporary life as depicted in literature, and (h) Symbolism.

The Conference was opened by the Address of the President of the International Association for Sanskrit Studies - Dr. R.N.Dandekar, an eminent scholar from India. The Conference was also addressed by other eminent scholars like Dr. Murray B. Emeneau, the President of the Conference and Professor Emeritus of Sanskrit, University of California, Berkeley. The Government of India had deputed a few scholars to participate in the Conference.

The Institute for Oriental Study, Thane, was also represented in this Conference by a team of Sanskrit Scholars from Maharashtra led by Dr. V.V. Bedekar. Probably this was the largest group in the Conference sponsored by a non-governmental agency.

Although the Conference was very well organised, the discussions centred mainly round the literary aspects and many other important subjects were not highlighted to the extent they deserved. In a nutshell it may be said the Conference was neither very good nor bad.

News in Brief

The 7th Conference of the International Association of Buddhist Studies will be held at Centro San Domenico, Bologna, Italy, in July, 1985, under the auspices of the University of Bologna.

The Conference will discuss subjects like (a) Ancient Indian Buddhism, Mahayana Buddhism, Late Indian Buddhism, Sri Lanka and South-East Asian Buddhism, Chinese Buddhism, Japanese and Korean Buddhism. There will be panels of discussions on special topics such as Buddhist Art, Iconography, Archaeology, Anthropology, Logic and Epistemology, Bibliography, Current religious trends etc.

Those desirous of presenting papers are requested to send the abstracts of not more than 300 words to the Local Secretary by the end of March, 1985.

For further details, please contact :

Prof. Amalia PEZZALI,
Local Secretary,
University of Bologna,
BOLOGNA (Italy).

The VI World Sanskrit Conference was held at Philadelphia (U.S.A.) under the auspices of the International Association of Sanskrit Studies (IASS) from October 13 to October 20, 1984. Sanskrit scholars from more than 18 countries numbering about 400 participated in the Conference.

The various programmes chalked out by the Institute for Oriental Study, Thane, are continuing as per the Calendar for 1985 already circulated. It is heartening to note that quite a good number of interested persons in Indology are attending the programmes and their number is gradually increasing.

A Seminar on **INDIAN SYMBOLOGY** was held on 17, 18 and 19 January, 1985 under the auspices of the Industrial Design Centre, Indian Institute of Technology, Powai, Bombay 400 076. This was a very well attended seminar. An exhibition of various symbols used was also held during the Seminar days.

The subjects discussed at the Seminar were-

- (1) Indian Visual Philosophy: Significance of Aksharas Akritis and Colours
- (2) Sexual Symbolism in Hindu Myths
- (3) Philosophy of Tantra and Temple Cult
- (4) Animal Symbolism in Indian Iconography
- (5) The Mandala Concept in Indian Architecture
- (6) Images of Cosmic Mountain in Asia
- (7) Astrological Symbols
- (8) Concept of Design in Ancient India
- (9) The Anatomy of Vulgarity: The Indian Case
- (10) Symbolism and the Performing Arts
- (11) Development of an Indian Symbol
- (12) Siddham Letter-forms
- (13) Islamic Symbols
- (14) Jain Symbols
- (15) Semiotics: Visual/Verbal
- (16) Significance of Indian Symbols for Visual Communication
- (17) Colour Symbolism in Indian Religious Art
- (18) Symbolism: Significance of Alpana Painting

1929

14th edition of Encyclopaedia Britannica was published. Under Agra, we find -

"...Taj Mahal was built by Shahjahan for his empress, who died in A.D.1631 and from one of her titled 'Taj Mahal' or crown of the palace, it takes the name by which it is most generally known outside India.

(Note - The lady's name was never Taj Mahal.) Moreover, if Buckingham Palace does not become Buckingham, 'Fort William' does not become William Windsor Castle and is never called Windsor, why should "Taj Mahal's tomb become Taj Mahal ?)

"...The architect of the Taj was Ustad Isa."

Under "Taj Mahal" we find "...This tomb built at Agra, India by Shahjahan for his wife Mumtaz Mahal (not Taj Mahal?). It was begun in 1632 and completed before 1650....The building is said to have cost over £ 3 million. (See events of 1927); it was probably designed by an architect named Ustad Isa.

Jadunath Sarkar, a historian was knighted.

1929-31 Sir Bannister Fletcher was President of R. I. B. A.

1930

Indian Institute of Architect was founded.

Gandhi launches Satyagraha (Civil disobedience movement).

1931

'Muraqqa-i-Akbarabad' edited by Said Ahmed of Agra, contains a letter from Aurangzeb to Shahjahan dated 1652 A.D. (p. 43, footnote 2). This letter remained untranslated into English till 1946.

Centenary of Lord Bentinck's declared intention to demolish Taj Mahal.

Sir John Marshall retires as Director-General of A.S.I. Mr. J. F. Blakiston takes over.

C. V. Vaidya's "Shivaji the founder of Maratha Swaraj" was published.

Motilal Nehru dies.

1934

'The Design Development of Indian Architecture' by Prof. C. Batley was published. About Taj Mahal he says, "... The fact that such planning is certainly indigenous to India, can be traced

in the layout of the simplest temple, in the magnificent temple town plans of South India and in the various Indian Mediaeval town layouts as reflected in the design of such a comparatively modern Indian town as Jaipur..."(p.XII). (How does a tomb fit in the layout of a temple ?).

Batley illustrates Hindu planning and Mohammedan planning but does not explain how Mohammedan planning is different from Hindu planning. They are in fact identical.

Batley virtually confesses that all the architects were Hindus. But instead of admitting that all the buildings claims to be Islamic are, in fact Hindu; he follows Ferguson's logic and says that the foundation, columns, roof decorations are all Hindu, but the building itself is a fine piece of Islamic Architecture !

In Appendix D, he says ".... The Independence of Bijapur was shortlived and its history is that of incessant wars, feuds and faction brawls, it is all the more marvellous therefore, how time was found for all the building work that was done within so short a period. (But the possibility of Muslim rules converting Hindu buildings into Mosques and Tombs does not occur to Prof. Batley as Ferguson does not say so.)

- In the western perimeter wall of Taj Mahal is a door, south of the Baoli Burj. It leads onto river bank. South of this door Mr. R.S. Varma, a conservation assistant of A.S.I. (Asiatic Society of India/Archaeological Survey of India) discovered a flight of 50 steps hidden in the perimeter wall. No further exploration was done by the A.S.I. Even this discovery is not mentioned in their annual report. The opening in the wall was bricked up when I visited Taj Mahal in December, 1981.

- Centenary of the founding of the R.I.B.A. (Royal Institute of British Architects).

- First issue of the journal of the Indian Institute of Architects appears. (April, 1934).

- Yet another edition of Bernier's Travels in the Mughal Empire was published by Oxford University Press of Bombay.

1935

- First Session of Modern History Congress held at Pune. (This later became All India History Congress).

- Government of India Act grants Provincial Self-Government.

1936

- George V dies. Edward VIII abdicates, George VI becomes King Emperor of the British Empire.

of the Moghamandala Vrat Rite in Bengal (19) Symbolism in Indian Festivals (20) Symbolism of Gestures (Mudras) in Indian Classical Dance (21) Case Studies of Contemporary Symbols (22) Symbol Design for Corporate Use (23) Symbol Design Activity at National Institute of Design and (24) International Standardisation Organisation (ISO) and its activities with special reference to the development of the International coherent theory for the design of Public Information Symbols.

Eminent professors and scholars in these subjects from India and abroad participated in the Seminar.

A 2,000-YEAR-OLD FEAT OF OF HYDRAULIC ENGINEERING IN INDIA

['Engineering' in India is as old as Vedic culture. Below is an extract from an article "A 2,000-year-old Feat of Hydraulic Engineering in India" by B.B.Lal in collaboration with K.N.Dikshit, which appears in one of the issues of "ARCHAEOLOGY".

The article pertains to the Ramayana-site of Shringaverapura, situated to the west-north-west of Allahabad on the banks of the river Ganga. The site is under excavation under the project "Archaeology of the Ramayana Sites" undertaken in 1977 jointly by the Indian Institute of Advanced Study, Simla, and the Archaeological Survey of India. The excavations are still underway.]

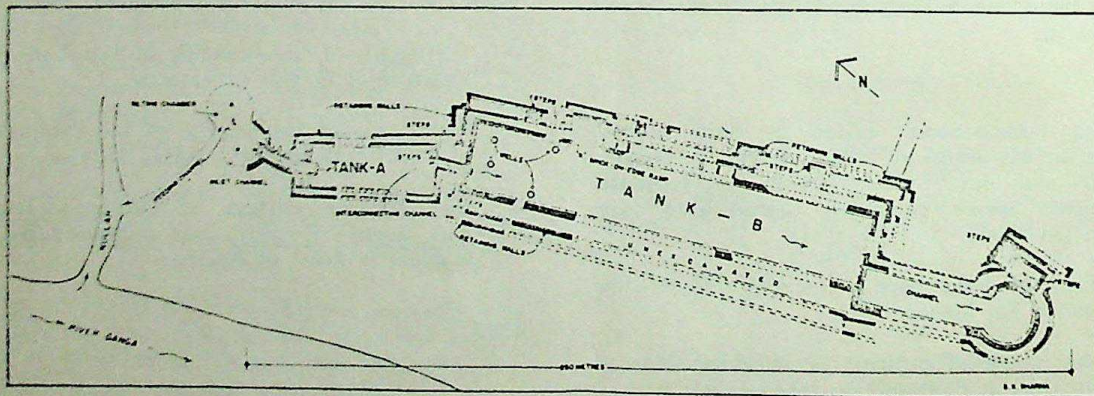
- Editor

have been used for religious purposes as well. This is indicated by the discovery in the tank complex of a large number of terracotta figurines of a goddess holding a child in her arms.

The hydraulic engineering required to make this tank work is fascinating. The water from the river first entered two successive silting chambers that opened into a curved channel leading to a brick-built siltation tank. From the upper level of this tank, clean water passed through another channel into the main tank. This second tank was provided with staircases at intervals for people to descend and fetch water. In order to ensure that a reasonable supply of water was maintained even during the dry summer months, a series of wells was dug in the bed of the tank through which sub-soil water supplemented the stored water. Finally the water passed into a circular complex which also had an elaborate system of stairs. Excavations are still in progress in the terminal section of the tank where a waste weir through which excess water flowed back into the river, is expected to be revealed.

The excavations at Shringaverapura form part of a much larger national project called "Archaeology of the Ramayana Sites" undertaken jointly in 1977 by the Indian Institute of Advanced Study in Simla and the Archaeological Survey of India, and plans call for it to continue up to 1988. The purpose of the project is to excavate certain sites associated with the Ramayana story in north India and to discover if the archaeological data can throw any light on the historicity of the great Indian Epic - the Ramayana of Valmiki.

Shringaverapura is located about 35 kilometers west-northwest of Allahabad. A good bridge crosses the Ganga at Phaphamau and connects the two places. The ancient mound of Shringaverapura stretches for nearly a kilometer along the left bank of the river, but has a width of only half a kilometer. However, the large number of damaged



A SKETCH OF THE SHRINGAVERAPURA TANK

"The current excavations at Shringaverapura in Uttar Pradesh, India, have brought to light a well-preserved 2,000-year-old water tank, which unlike its contemporaries, is not only immensely large - over 250 meters in length - but also has the unusual feature of having been fed by water diverted from the Ganga River through a special canal. Dated on the basis of pottery, terracotta figurines, coins, and inscribed seals, the tank speaks volumes for the knowledge of ancient Indian hydraulic engineers. Besides having served as the water supply for the settlement, the tank appears to

brick structures peeping out from the river section indicates that a sizeable portion of the ancient mound has been washed away by the river. It is difficult to be sure of how much, but the horse-shoe bend of the river at this point and the location of the opposite bank of the river a couple of kilometers away would suggest that the river may have been substantially farther away in ancient times.

Excavations have revealed that the first settlement at Shringaverapura began in the eleventh

century B.C., but for reasons unknown, the site was abandoned soon after the first occupation. It was only around the middle of the tenth century B.C., that regular occupation started, which continued through the centuries to come. Because of the obviously easily accessible water supply the earlier settlements were as close to the ancient river bank as possible, but as the population grew houses began to be constructed farther away from the river bank. By about the beginning of the Christian era, the village had attained almost the same size as that of the mound now in evidence.

When parts of the settlement began to grow up quite far away from the river, availability of a water supply must have posed a major problem. Thus, some ruler would appear to have thought of constructing a tank so that water could easily be made available to the populace. Unfortunately, in the absence of discovery so far of any inscribed slab - such as we sometimes find even in ancient India attached to large public structures - it is impossible to know the name of the ruler who constructed this tank. It is likely that some king of Kosala, within whose territory Shringaverapura lay, may have been responsible for it but even this remains only a guess.

While water tanks dating back to the beginning of the Christian era are known from other places in India, such as Mathura in Uttar Pradesh, the tank of Shringaverapura is distinguished from all other contemporary examples in two major ways. Whereas the Mathura tank, for example, measures about eight by nine meters, the Shringaverapura tank has already been excavated to a length of about 250 meters without yet reaching its end. But it is not its size alone that makes the Shringaverapura tank so outstanding. The principle of hydraulic engineering applied to its construction make it so important.

Other known contemporary water tanks were filled with rain-water, partly falling directly into them and partly washed down from adjacent higher lands, but the Shringaverapura tank was systematically fed by training the water of the Ganga River. Not very far to the north of the ancient mound at Shringaverapura there flows a *nullah*, or water course, that normally drains water into the river. During the peak of monsoons, however, when the river is in spate and the water level rises several meters above the normal, the *nullah* brings the water backwards.

After observing this phenomenon year after year, the ancient engineers obviously thought of a way to solve the water supply problem of Shringaverapura. They dug a channel and through it diverted the rising water of the river to feed the tank. The feeding channel has sloping sides and measures about 11 meters in width at the top and about three meters at the bottom, and is more than four meters in depth. Through this channel the water reached two large, roughly circular chambers wherein silt and other muck settled down. After leaving these chambers, the partly cleaned water entered the tank complex proper, constructed of kiln-fired bricks measuring 41.5 to 44 centimeters in length, 27 to 28.5 centimeters in breadth and 5.5 to seven centimeters in thickness.

The tank-side part of the second silting chamber is lined with an arc-shaped wall. Just below the frontage of the channel through which the water entered the tank stands a stepped wall, evidently built to break the force of the in-rushing water. The inlet channel itself is not straight, but deliberately curved, so that once again the force of the water could be further broken. From this inlet channel the water did not fall directly on the bed of the tank, but instead cascaded over a series of steps with the result that its force was further reduced. Over and above this, a pavement of large bricks, measuring 64 by 48 by 12 centimeters, was provided at the point where the water first touched the tank bed. But this was not the end of the measures the ancient engineers took to reduce the force of the incoming water.

The first part of the tank complex (marked on the plan as Tank A) is, strangely, not a rectangle as one would normally expect. Instead, it becomes slightly wider as the distance from the intake point increases. This otherwise puzzling phenomenon was very satisfactorily explained by modern hydraulic engineers, who suggested that the tank was purposely built in this shape so that the water, on entering the tank, would spread out and thereby further lose its force. This is known as "horizontal warping."

The ancient engineers made another provision to break the water's force. Instead of building a single vertical retaining wall, they constructed two to four retaining walls as necessary, each one placed a little outward from the one below it and inclined at angles varying from 11 to 13 degrees to the vertical. This technique, according to modern hydraulic engineers, is known as "vertical warping." Tank A also was used for siltation, and the silt collected in it appears to have been removed periodically by using the steps provided at its southeastern corner.

From the upper level of Tank A, clean water passed through a channel into Tank B. In this case too the water did not fall vertically onto the floor of the tank, but cascaded over a series of steps. A brick pavement - of which some portions remain - appears to have been provided at the point where the water fell.

Steps were built at several points in Tank B for people to reach the tank bed. The arrangement and design of these steps also varied. In one case, two flights of steps descend from opposite directions to a common level. At this common level, a ramp constructed of bricks set on their edges went farther down to meet another three steps leading to the bed of the tank.

Tank B has three retaining walls in the northern part but toward the south these become four, accounting for a total height of nearly eight meters. Of these walls, the lowest alone is 3.5 meters in height and has as many as 49 courses of bricks. Judging from the level of the top of the stone sill in the inlet channel, which marks the retention level of the water, it would appear that there were 3.5 to 4 meters of water in the tank when it was full.

But what is still more noteworthy is that the engineers envisaged the contingencies of the summer as well, when the level of the stored water would naturally go down, because of consumption since

the preceding monsoons (when the tank was filled) and evaporation through heat. To meet this contingency, the engineers dug wells in the bed of the tank so that the sub-soil water could supplement that already stored. How many wells there were altogether in the tank is difficult to say. But in the two four-meter-wide strips where the bed of Tank B has so far been exposed, a total of four wells have been discovered. Each well is less than a meter in diameter. Because of the sub-soil water gushing up during excavations the actual depth of these wells could not be ascertained, but in one case silt and brick debris were found going down to more than 1.5 meters below the tank bed.

At the southern end of Tank B, the retaining walls turned farther southward so as to form a four-meter-wide channel. Although the intermediary part remains to be excavated, indications are that this channel debouches into a roughly circular chamber fully lined with brick walls, one behind the other. What is of great interest in this southernmost complex is the arrangement of the flights of steps which, commencing with what was then the ground level outside, continued with directional changes all the way down to the innermost circular chamber, stopping hardly a meter short of the tank bed.

Surface indications suggest that the tank complex extends another 20 to 30 meters beyond this circular complex, wherein we may locate the "waste weir" through which excess water flowed out during the monsoon intake. While details of this waste weir may have to be awaited patiently during the next two years of digging, interest attaches to six parallel channels immediately to the south of the circular chamber. Since the intermediary portion still remains to be dug, it is not clear how these channels were connected with the circular chamber.

Besides being the prime source of water supply to the settlement, the tank appears to have had religious overtones. In it have been found a large number of terracotta figurines, small and large, of gods and goddesses. The typical goddess figure is either standing or half seated and is distinguished by her association with a child or children whom she holds in one of her arms. She is evidently a protector of children, and may be equated with Hariti of the Buddhist pantheon, or Sashthi of the Hindu. The god is probably Kuvera, who is distinguished by his pot-belly and is worshipped especially for wealth. These figurines may have been ceremonially immersed in the tank - a practice which has its parallels even in present-day India - for example, the immersion of the figure of the goddess Durga in West Bengal or of Ganesh in Maharashtra.

These very figures, on the basis of their style, provide reasonably good evidence for dating the tank. At many north Indian sites, such figures have been found in levels that can be ascribed to about the first to third centuries A.D. After the tank was destroyed and silted up, a large occupational complex rose on the spot from which a gold coin of a late Kushan king datable to circa A.D. 225 has been found. A few terracotta figurines in the late Kushan style have also been found. The tank appears to have been constructed around the beginning of the Christian era and may have

had a life span of about two centuries at the most.

The very river which fed the tank with its waters seems to have taken its toll. Destruction of the river-side retaining walls through very heavy flooding is in evidence at various points in the ancient tank. At one spot, the force appears to have been so strong that good bit of the middle retaining wall was not only destroyed but a part of it was actually pushed a couple of meters away. But whatever the other details of the life history of this tank, it doubtless stands as a singular monument to the skill of Indian hydraulic engineers 2,000 years ago."

(Contd. from page No.110)

The Jataka story is similar to that, found in Ramayana and Mb. It is about an ascetic named Gazellehorn, born as a son of a brahmin hermit and a gazelle. Gazellehorn wears a horn on his forehead, as an inheritance from his mother. As a youngster he grows in the solitude of jungle, and is looked after by his father only. He practices strict asceticism and his spiritual powers develop. Gods feel insecure and cause a drought which can be averted only by breaking down the ascetic powers of Gazellehorn. The rest of the story closely resembles the one narrated in the Mb. In the Tibetan and the Chinese version of this Jataka story, the drought is not inflicted by the gods out of fear of the supernatural powers of the ascetic boy, but due to the cursing of the rain-god by the boy, as he slipped on the watery ground and broke his pot. In the Tibetan version, the ascetic boy is enticed with sweets and is taken to the king's palace and legitimately marries the king's daughter. In the Jataka account the ascetic boy is not mentioned as Rushyashruna but as Ekshruna. This explains the term unicorn in later western tradition.

The theme of Rushyashruna has a close parallel in the Hierodule episode of Gilgamesh epic, where he stands comparison with Enkidu. Enkidu is seduced by a whore of the Ishtar temple.

Swami Vivekananda, speaking at the turn of the last century has advised us to dive deep into our mythology. He said that behind those ancient mythologies were suggests of truth while the language of modernity was an arrant trash. He warned us then, that we need not throw a thing overboard because it is clothed in mythology. Human language is an attempt to express the truth, and mythology does the same thing. According to Swami Vivekananda, mythological and symbolical parts of religion are natural growths, which early environ. and the aspiring soul, lift it godwards. Spiritual giants have been produced where there is exuberent growth of mythology. ²⁸

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